The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2224.—VOL. XLVIII. LONDON, SATURDAY, APRIL 6, 1878. [WITH SUPPLEMENT.] {PRICE ..... SIXPENCE. PER ANNUM, BY POST, £1 4s.

MR. JAMES H. CROFTS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER.
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, Miscellaneous, Insurance, Assurance, Telegraph, Shipping, Canal, Gas, Water, and Dock Shares.

BUSINESS negociated in Stocks and Shares not having a general market value.

BUSINESS in COLLIERY and IRON Shares, and in the principal WAGON and MANUFACTURING COMPANIES of the NORTH of ENGLAND and SCOTLAND.

BUSINESS in all the principal COTTON SPINNING Shares.

Mr. J. H. CROFTS, having now established CORRESPONDING AGENCIES in all the CHIEF TOWNS of the United Kingdom, is prepared to deal in the various LOCAL Stocks and Shares at close market prices.

ACCOUNTS OPENED FOR THE FORTNIGHTLY SETTLEMENT.

A Daily Price List, issued at 5 P.M., giving latest Quotations up to close of Market. Also, on the 1st of every month a List of all Securities currently dealt in upon the Mining and Stock Exchanges, with latest prices, current dividends, rate of interest yielded at market price, &c., and every Friday a general List containing closing prices of the week.

MINES INSPECTED.

BANKERS: CITY BANK, LONDON; SOUTH CORNWALL BANK, ST. AUSTELL.

SPECIAL DEALINGS in the following, or part:—

50 Aberdaunant, 9s.
25 Bodidris.
20 Cardiff and Swansea.
10 Chapel House, £3.
50 Chontales, 12s. 6d.
40 Birdseye Creek.
100 Combmartin, 3s. 6d.
20 Condes of Chili, off. w.
50 Derwent, 25s.
20 Devon Cons., £2 18s. 9
15 Eberhardt, £5 13s. 9d.
10 East Van, £5⅞.
50 Flagstaff, 14s.
20 Frontino, 33s. 6d.
5 Great Laxey, £19¼.
20 Halcomb Sack, £3¼.
50 Holmbush, offer wtd.
20 Hultafall.
50 I. X. L., 2s. 6d.
50 Javali, 7s.
20 Leadhills, £3 17s. 6d.
5 Linares, £5 17s. 6d.
50 Llanrwst, £3¼.
30 Llan Gan, offer wtd.
10 Minera.
25 N. Quebrada, 34s.
20 N. Zea. Kapan., 13s 9d
40 North Laxey, 4s.
50 Pandora.
50 Penstruthal, 5s. 3d.
75 Pestarena, 5s.
50 Parys Moun., 9s. 3d.
50 Port Phillip, 10s.
50 Rookhope, 19s.
20 Richmond, £9 17s. 6d.
10 Roman Grav., £8 8s 9
25 St. Harmon.
20 Scottish Austra., 35s.
50 St. Bride's Slate, 37s 6
150 So. Rom. Grav., 2s.
15 Tankerville, £4.
20 Van Consols, 10s.
20 W. Tankerville, 13s. 9
40 ditto Preference, 25s.
10 W. Chiverton, £13.
10 W. Craven Moor, £7½
10 W. Wye Valley, £3 8 9
15 Wye Valley, £2.

. SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.

D'ERESBY MOUNTAIN AND D'ERESBY CONSOLS.—SPECIAL BUSINESS in these SHARES.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

FOREIGN BONDS—ARGENTINE—EGYPTIAN—RUSSIAN, TURKISH, SPANISH, PERU. &c.
SPECIAL BUSINESS in the above, and Fortnighty Accounts opened on receipt of the usual cover.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

RAILWAYS—HOME AND FOREIGN.—SPECIAL BUSINESS in the above, and Fortnightly Accounts opened on receipt of the usual cover.
JAMES H CROFTS, 1, FINCH LANE, LONDON.

MISCELLANEOUS AND TRAMWAY SHARES.—SPECIAL BUSINESS in—

MISCELLANEOUS.	CHEMICAL.	TRAMWAYS.
Alhambra Palace.	Lawes.	Argentine.
Fore-street Warehouse.	Langdale.	Bristol.
Halcomb Sack.	Newcastle.	Edinburgh.
Positive Assurance.	TELEGRAPHS.	Glasgow.
AQUARIUM.	Direct.	London.
Brighton.	Globe.	North Metropolitan.
Royal (Westminster).	Telegraph Construction	Tramways Union.
Yarmouth.	W. India and Panama.	

BUSINESS TRANSACTED in all MISCELLANEOUS SHARES (of whatever description) having LONDON or COUNTRY MARKET VALUES.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.
Bankers: City Bank, London; South Cornwall Bank, St. Austell.
ESTABLISHED 1842.

MR. W. H. BUMPUS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER,
44, THREADNEEDLE STREET, LONDON, E.C.
ESTABLISHED 1867.

BUSINESS transacted in MINING and COLLIERY Shares of every description. English and Foreign Stocks, Colonial Government Bonds, Railways, Banks, and Miscellaneous Shares, and all Securities dealt in on the London Stock Exchange, for INVESTMENT or SPECULATION.
Purchases and Sales negociated in Unmarketable Stocks and Shares.
Speculative Accounts opened for the Fortnightly Settlement.
References given and required when necessary.
A Stock and Share List forwarded free on application.

MR. BUMPUS has SPECIAL BUSINESS in the undermentioned:—

50 Aberdaunant, 8s.
30 Assheton.
50 Blue Tent, £2½.
40 Birdseye Creek.
100 Chontales, 12s.
25 Condes of Chili.
50 Don Pedro, 13s.
25 Derwent.
20 Devon Con., £2 18s. 9
15 Eberhardt, £5 13s. 9d.
10 East Van, £5⅞.
50 Flagstaff, 14s.
20 Frontino, 33s. 6d.
5 Great Laxey, £19¼.
15 Gorsedd & Mer., £4½
50 Glenroy, 15s. 6d.
40 Hingston, 9s.
20 Hultafall.
60 Javali, 6s. 9d.
35 Kapanga, 11s. 6d.
50 Last Chance, 14s.
30 Llanrwst.
20 Leadhills, £3 16s. 3d.
3 Minera.
60 North Laxey, 4s.
25 New Quebrada, 33s 6d
50 Parys Mount., 9s. 6d.
15 Pateley Bridge, £3¼.
40 Penstruthal, 5s. 6d.
50 Plynlimmon, 7s. 6d.
25 Port Phillip, 11s. 6d.
20 Richmond, £9⅞.
15 Roman Grav., £8 8s 9
5 South Condurrow.
10 Tankerville, £3⅞.
25 Tyn-y-Fron.
5 Van.
10 Wh. Peevor, £6½.
20 Wh. Grenville, £3¼.
50 W. Tankerville, 13s 6d

DEVONPORT AND TIVERTON BREWERY COMPANY.—Mr. BUMPUS can supply a limited number of these shares on advantageous terms to cash purchasers.
The following Shares are worth Buying for a rise, viz.:—WHEAL GRENVILLE, HULTAFALL, ROOKHOPE, SOUTH FRANCES, and PARYS MOUNTAIN.

SPECIAL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.

WILLIAM HENRY BUMPUS, SWORN BROKER.
Offices: 44, Threadneedle Street, London, E.C.
BANKERS—The NATIONAL PROVINCIAL BANK OF ENGLAND, E.C.

WILLIAM B. COBB, STOCK AND SHARE DEALER,
62, CORNHILL, LONDON, E.C.
Bankers: The Alliance Bank (Limited).

NOTICE OF NEW ADDRESS.
MR. GEORGE BUDGE, STOCK AND SHARE DEALER, begs to inform his clients that he has REMOVED his BUSINESS from 4, Royal Exchange Buildings, to—
NO. 9, GRACECHURCH STREET, LONDON
(Established 28 Years).

Mr. Budge has dealings either as Buyer or Seller, at close net prices, in Caron, Van, East Van, Chapel House, West Wye Valley, Great Laxey, Grogwinion, Lisburne, D'Eresby, Marke Valley, Wye Valley, Bedford United, Exchequer, Richmond, Frontino, South Aurora, Last Chance, Red Rock, Ladywell, Flagstaff, Eberhardt, South Cwmystwith, Don Pedro, South Frances, West Frances Hornachos.

MR. BUDGE BEING A DEALER, DOES NOT CHARGE COMMISSION.

SPECIAL BUSINESS in SHARES of the CARON LEAD MINE (Limited).—This very promising mine is situated near to the Lisburne and Grogwinion Mines, and contains parallel lodes thereto. All the capital is subscribed, and the works are in full operation. Sales of lead will commence directly the new dressing machinery is erected. These shares are strongly recommended for an early rise in price. Present quotation, 2¼ to 2¾, cum div., at which Mr. Budge is prepared to deal. Full particulars on application.

WEST WYE VALLEY.
This property is now making regular returns of lead. The sales have been increased from 40 to 60 tons per month, and are expected to further increase. The shares are well worth attention. Price £3¼ to £4.

ADDRESS—9, GRACECHURCH STREET, LONDON, E.C.

MESSRS. PETER WATSON AND CO.,
54, OLD BROAD STREET, LONDON, E.C.
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BANKERS: The ALLIANCE BANK (Limited).
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MR. ALFRED E. COOKE,
STOCK AND SHARE DEALER,
76, OLD BROAD STREET, LONDON, E.C.
ESTABLISHED 1853.

INVESTORS' GAZETTE, published every FRIDAY EVENING in time for post, sent on receipt of postage stamp.
AN INVALUABLE PUBLICATION.
Edited by—
ALFRED E. COOKE, 76, OLD BROAD STREET, LONDON.

D'ERESBY MOUNTAIN.—These Shares were recommended by MR. COOKE at £30. The price is now £80. They will STILL GO HIGHER.

D'ERESBY CONSOLS.—Shares should be immediately purchased, and may be had on best terms.

RAILWAYS AND FOREIGN STOCKS.—Business done at closest STOCK EXCHANGE prices.
ALFRED E. COOKE, 76, OLD BROAD STREET, LONDON.

MR. JAMES STOCKER, STOCK AND SHARE BROKER, AND MINING SHARE DEALER,
2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.
[Established 1848.]
RAILWAYS, FOREIGN BONDS, BANK, INSURANCE, TRAMWAY, and all MISCELLANEOUS STOCKS and SHARES.
BRITISH AND FOREIGN MINES:—

Aberdaunant, 8s.	Pandora, 14s.	White Cliff.
Chapel House, £3.	Parys Mountain, 10s.	Chontales, 11s. 6d.
D'Eresby Consols.	Pateley Bridge, £2⅞.	Don Pedro, 12s.
D'Eresby Mountain.	Penstruthal, 5s.	Eberhardt, £5⅛.
East Van, £5⅛.	Roman Grav., £8 8s. 9d.	Flagstaff, 14s.
Grogwinion, £3⅝.	Rookhope, 18s. 3d.	Frontino, 30s.
Glenroy, 16s. 6d.	South Cwmystwith.	Hultafall, £4¾.
Great Laxey, £19¼.	Tankerville, £4.	Last Chance, 15s.
Gorsedd, £4 7s. 6d.	Tyn-y-Fron.	N. Zealand Kap., 12s 6d
Leadhills, £3⅞.	Van, £22¾.	Port Phillip, 11s.
Llanrwst, 42s.	Wye Valley, 38s. 9d.	Richmond, £9¾.
Monydd Gorddu.	West Wye Valley, £3¾.	South Aurora, 4s. 6d.
North Laxey, 4s.	Wh. Grenville, £3.	Tecoma, 3s. 6d.

Carn Brea, D'Eresby Mountain, Devon Consols, Dolcoath, Mellanear, Minera, South Molton Consols, Wheal Crebor, West Godolphin, Wheal Kitty.—Almada, Argentine, Chicago, Hornachos, Javali, Malabar, South Aurora, Tolima.
COLLIERIES.—Alltami, Chapel House, New Shariston, and Thorp's Gawber.
MISCELLANEOUS.—St. Bride's Welsh Slate, Credit Foncier, Hudson's Bay, Lawes Chemical, Native Guano, Tramway, and Aquarium Shares.
BANKERS: LONDON AND WESTMINSTER.

MR. T. E. W. THOMAS, SHARE BROKER,
3, GREAT WINCHESTER STREET BUILDINGS, E.C.
Established 1857.

The following are the latest prices at which business could be done. Where the difference between the buying and selling price is wide transactions may be effected at an intermediate price:—

	Buyers.	Sellers.		Buyers.	Sellers.
Carn Brea	£ 44	£ 46	New Quebrada	£ 1½	£ 1¾
Caron	2	2½	New Zealand Kapanga	10s.	13s.
Chontales	10s.	12s.6d.	Panulcillo	1	1¼
D'Eresby Mountain	75	85	Parys Mountain	8s.	9s.
Devon Great Consols	2½	3	Pateley Bridge	2¾	3
Don Pedro	10s.	11s.	Penstruthal	3s.6d.	5s.
Eberhardt	5⅛	5¼	Plynlimmon	5s.	7s.
East Caradon	7s.6d.	10s.	Richmond	9¾	9¾
East Van	5⅛	5¾	Roman Gravels	8¾	8⅞
Exchequer Gold	2s.	3s.6d.	Rookhope	17s.	19s.
Flagstaff	10s.	15s.	South Caradon	75	80
Frontino	1⅜	1⅝	South Condurrow	10¼	11½
Glenroy	14s.	16s.	Tankerville	3½	4
Gorsedd and Merllyn	4	4½	Tincroft	10⅜	11¼
Grogwinion	3⅛	4	Van	20	22
Great Laxey	18	20	West Chiverton	12	13
Hultafall	4¼	4½	West Pateley Bridge	1⅞	2⅛
Herodsfoot	7	8	West Godolphin	1	1¼
Hingston	7s.	9s.	West Tankerville	10s.	12s.6d
Last Chance	12s. 6d.	15s.	West Wye Valley	3	3½
Ladywell	15s.	17s. 6d.	W. Grenville	3	3¼
Leadhills	3¾	4	Wheal Kitty	1¾	2¼
Marke Valley	10s.	11s. 3d.	Wye Valley	1½	2
North Laxey	3s. 6d.	4s. 6d.	Yorke Peninsula	5s.	6s.

Selections, founded on practical mining knowledge, made for the use of investors. An experience of 20 years.—Business on hand in East Van, Roman Gravels, Leadhills, Gorsedd and Merilyn, Tyn-y-fron, and other Lead Mines.
The Van appears to be failing in the bottom levels.

MESSRS. W. REYNOLDS AND CO.,
STOCK AND SHARE DEALERS,
57, GRACECHURCH STREET, AND TALBOT COURT,
LONDON, E.C.

MR. E. J. BARTLETT, STOCK AND SHARE DEALER,
No. 30, GREAT ST. HELEN'S, LONDON, E.C.

Capitalists should read the Tenth Edition of "How and When to Invest," post free One Shilling, and a small Pamphlet containing information regarding investments unaffected by war. The latter free by post on application.
SPECIAL BUSINESS in East Lovell, East Van, D'Eresby Mountain, Chapel House Colliery, Great Laxey, Minera, Richmond, Bodidris, and South Condurrow shares.

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER,
29, BISHOPSGATE STREET, LONDON, E.C. (Established 21 Years),
can sell the following SHARES, at prices annexed:—

75 Almada, 8s. 9d.
75 Aberdaunant.
60 Bodidris.
25 Birdseye Creek, 18s 6d
60 Chontales, 11s. 6d.
50 Cambrian, £2 17s. 6d.
20 Chapel House, £3 2 6
50 Condes of Chili, 10s.
60 Don Pedro, 13s.
25 Devon Con., £3
20 D'Eresby Con., £12½
2 D'Eresby, £76 10s.
25 East Van, £5 13s. 9d.
20 Eberhardt, £5 13s. 9d.
25 Frontino, £1 15s.
50 Flagstaff, 14s. 6 l.
15 Gorsedd & Meril., £5
10 Great Laxey, £19 5s
10 Grogwinion, £3 15s.
30 Glenroy, 15s.
20 Hultafall.
15 Ladywell, 18s. 3d.
20 Leadhills, £3 17s. 6d.
25 N. Quebrada, £1 16s. 3
25 Newport Aber., £3¾
5 Minera, £11 10s.
100 Pestarena, 5s. 3d.
15 Pateley Bridge, £3 1 3
60 Parys Mount., 11s 6d.
75 Penstruthal, 5s. 6d.
50 Port Phillip, 11s. 6d.
20 Rookhope, 18s. 9d.
15 Richmond, £9 17s. 6d
10 Roman Grav., £8 10
15 Tankerville, £4 2s 6d
60 Tecoma, 3s. 3d.
40 Tyn-y-Fron
6 Van, £24 10s.
25 Yorke Penin., 5s. 6d.
15 W. Grenville, £2 17s 6

Shares bought and sold at net prices. Telegrams promptly attended to.
Specially Recommended for an early rise in price:—Temple, Gorsedd and Merllyn, Bodidris, Tyn-y-Fron, and Hultafall.

JOSEPH JOHN PYNE,
STOCK AND SHARE BROKER, AND MINING SHARE DEALER,
6, BISHOPSGATE, LONDON, E.C.

Mr. PYNE having been connected with MINING ENTERPRISE for upwards of FOURTEEN YEARS, and having been a DIRECTOR of MINES in SHROPSHIRE, MONTGOMERYSHIRE, CARDIGANSHIRE, CARNARVONSHIRE, YORKSHIRE, and in VENEZUELA, has had great opportunities of becoming acquainted with this particular branch of industry, and will always be desirous of giving every information in his power to all parties transacting business with him.
ALL DESCRIPTIONS OF SHARES are dealt in, including BRITISH and FOREIGN STOCKS, and RAILWAY SECURITIES.
A DAILY SHARE LIST issued, giving latest quotations up to the close of the market.
AN EXTENDED LIST made up to the first of every month of all securities usually dealt in, giving highest and lowest prices for the month, the current dividends, and when payable, with amount of interest calculated at the present market price. Will be forwarded when desired.
MR. PYNE DOES NOT ISSUE ANY CIRCULAR.
BANKERS—THE ALLIANCE BANK (LIMITED).

MR. CHARLES THOMAS,
MINING AGENT, STOCK AND SHARE DEALER,
3, GREAT ST. HELEN'S, LONDON, E.C.

MR. ALFRED THOMAS,
MINING AGENT, AND STOCK AND SHARE DEALER.
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SAFE INVESTMENTS TO PAY 4 TO 6 AND 8 PER CENT.
It is a "Safe Guide" to Investors, containing reliable information upon all Stock and Share Investments; also all the Safest Dividend Investments of the day.
SAFE INVESTMENTS IN THE FOLLOWING—

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American Stocks and Bonds.	British, Foreign, Colonial Mines.
Bank, Financial, Shares.	Tea and Land Shares.
Tramway, Telegraph Shares.	Shipping, Dock Shares.
Continental Town Bonds.	Indian, Colonial Stocks.
Municipal Bonds.	Miscellaneous Shares, &c., &c.

Market prices; Dividends upon outlay, and when payable; Reports, &c., &c.
GOULD SHARP AND CO., STOCK AND SHARE BROKERS,
42, POULTRY, LONDON, E.C.—ESTABLISHED 1852.
Bankers: London and Westminster, Lothbury, London, E.C.

MR. EDWARD ASHMEAD, 62, CORNHILL, LONDON,
LONDON MINE AGENT, ACCOUNTANT, AND AUDITOR.

MESSRS. EKINS AND CO., STOCK AND SHARE DEALERS,
14, QUEEN VICTORIA STREET, MANSION HOUSE, LONDON.
Bankers: Metropolitan.
Special dealings in South de Eresby Mountain Shares.

FERDINAND R. KIRK, STOCKBROKER,
5, BIRCHIN LANE, E.C.
Bankers: London and Westminster, and City Bank.
SPECIAL BUSINESS in Llanrwst, Alamillos, West Wye Valley, Caron, Devon Consols, Minera, Eberhardt, D'Eresby Mountain, and D'Eresby Consols.
COLLIERIES.—Thorp's Gawber, Newport Abercarn, New Shariston, Alltami, Cardiff and Swansea, Chapel House, Pelsall.
MISCELLANEOUS.—General Credit, Royal Aquarium, Yarmouth Aquarium, Brighton Aquarium, Hudson Bay, Otago Investment, Diamond Rock.
FOREIGN BONDS.—Egyptian Preference, ditto Unified, Columbian, Bolivian, Turkish 1871, ditto 1865. A large business for fortnightly settlements is being done in several of these.

WILLIAM GABBOTT, STOCK AND SHARE DEALER,
8, DRAPER'S GARDENS, THROGMORTON STREET, LONDON.
A List of Sound and Profitable Investments sent free on application.
. "Enquiry is one of the chief characteristics of the age we live in." See my letter on Richmond in the Supplement to this day's Journal.

MR. THOMAS THOMPSON, JUN., STOCK BROKER,
1, PALMERSTON BUILDINGS, BISHOPSGATE STREET,
LONDON, E.C.

Mr. THOMPSON transacts business in every species of Stock Exchange and Mining Securities.
Mr. THOMPSON affords reliable information to investors, and can give, when desired, a list of first-class Stocks and Shares, yielding 4 to 10 per cent. dividends upon present prices.
Mr. THOMPSON'S weekly Circular may be had on application.

MR. M. F. DORMER, STOCK AND SHARE DEALER,
79, CORNHILL, LONDON, E.C.
Has business in 100 Birdseye Creek; 60 Blue Tent; 25 D'Eresby Consols; 20 East Van; 75 Fall Creek; 50 Hultafall; and 35 Pateley Bridge at close market prices.

REMOVAL.
MR. J. B. BRENCHLEY, MINING SHAREDEALER, from 78, Old Broad street, to 9, DRAPER'S GARDENS, THROGMORTON STREET, LONDON, E.C.

MESSRS. W. J. TALLENTIRE AND CO.,
STOCK BROKERS, AND DEALERS IN BANK, TRAMWAY, MINING, AND MISCELLANEOUS SHARES,
20, CHANGE ALLEY, CORNHILL, LONDON, E.C.,
Transact business in Stock Exchange Securities and Mining Shares of every description, either for immediate cash or the usual bi-monthly settlements, and also afford advice personally or by letter to executors, trustees, capitalists, and investors of every class in the selection of Securities for safe and profitable investment, their experience of the markets, extending over a period of more than 17 years' together with special facilities for acquiring information, enabling them to act beneficially for clients.
They have established Corresponding Agencies in all the principal towns of the United Kingdom, and are prepared to deal in the various local Stocks and Shares at close prices. Orders per post or telegraph receive prompt attention.
INVESTORS SHOULD APPLY for a copy of Messrs. W. J. TALLENTIRE and Co.'s Circular, SENT POST FREE. It contains valuable information on Foreign Stock, Railway, Mining, and General Investments.

TO INTENDING INVESTORS AND SHAREHOLDERS.
MESSRS. W. J. TALLENTIRE AND CO., 20, CHANGE ALLEY, CORNHILL, LONDON, E.C., have the following MINING SHARES FOR SALE.
OFFERS CAN BE MADE, OR PRICES WILL BE FORWARDED:—

10	BEDFORD UNITED	COPPER.	50	PENNERLEY	LEAD.
10	BODIDRIS	LEAD.	100	ROOKHOPE	do
3	CARN BREA	TIN.	15	ROMAN GRAVELS	do
1	DOLCOATH	do	50	RED ROCK	do
15	EAST CRAVEN MOOR	LEAD.	20	SO. CWMYSTWITH	do
50	EAST CHIVERTON	do	15	ST. HARMON	do
20	EAST VAN	do	20	SOUTH CONDURROW	TIN.
100	GLENROY	do	10	TANKERVILLE	LEAD.
10	GREAT HOLWAY	do	60	VAN CONSOLS	do
4	GREAT LAXEY	do	5	WEST WYE VALLEY	do
20	LLANRWST	do	50	WHEAL AGAR	TIN.
20	HULTAFALL	do	20	WEST CRAVEN MOOR	LEAD.
30	LOVELL	TIN.	25	WEST CHIVERTON	do
100	MEDLYN MOOR	do	25	WHEAL JANE	TIN.
150	NORTH LAXEY	LEAD.	100	WHEAL CREBOR	COPPER.
50	PARYS MOUNTAIN	COPPER.	20	WHEAL GRENVILLE	do
100	PRINCE OF WALES	do	10	WHEAL PEEVOR	TIN.

N.B.—Some of the above will be sold on specially favourable terms to cash purchasers.

GROGWINION LEAD MINE (LIMITED).
MESSRS. H. HALFORD AND CO., STOCK AND SHARE BROKERS, of EXCHANGE CHAMBERS, CHANGE ALLEY, LOMBARD STREET, strongly recommend the above mine as one of the best and safest mining investments. Dividends are paid half-yearly. The mine has lately very much improved in the deepest workings, and the sales for the present month are 150 tons of lead.

WYE VALLEY, WEST WYE VALLEY, RED ROCK, AND SOUTH CWMYSTWITH LEAD MINES.
These mines have all recently improved very much, and large sales of lead are being made. Shares in all of them should be secured at once.

CARON LEAD MINE (LIMITED).
Subscribed Capital £16,000 (all subscribed in a few days).
This company is likely to prove one of the greatest successes of modern times. The mine is now in full work, good Reserves of Lead laid open, and sales will commence as soon as the new dressing machinery is completed. The shares are, we consider, likely to greatly increase in value in a very short time.

LOCOMOTIVE TANK ENGINES,
fitted with COPPER FIRE-BOX, BRASS TUBES, STEEL TYRES, and in finish equal to the MAIN LINE LOCOMOTIVES, FOR SALE, on Cash or Deferred Payments.—Apply to—
FOX, WALKER, AND CO., ATLAS WORKS, BRISTOL.

Lectures on Practical Mining in Germany.

LAUSTHAL MINING SCHOOL NOTES—No. LXVIII.*

BY J. CLARK JEFFERSON, A.R.S.M., WH. SC.,

Certificated Mining Engineer.

(Formerly Student at the Royal Bergakademie, Clausthal).

[The Author reserves the right of reproduction.]

SECTION V.

A.—TIMBERING IN LEVELS AND WORKING PLACES.

Before considering the two separate divisions of simple and compound timbering under this head we shall notice the principal modes in which the connections or joints of the timbering are made.

1.—NOTCHING: This is the simplest mode of connecting two pieces of timber together: its use occurs only in the case of round timber. The most usual example is that in which the upper ends of the legs of a door-set are notched, or hollowed out, so as to receive the round cap piece, which is placed upon them, having no surface cut specially for the joint. The upper ends of the legs are thus hollowed out cylindrically, and the cap piece rests upon them with its undiminished strength. This case is especially favourable where the vertical pressure is considerable, the chief objection being that in the case of excessive pressure the cap acts as a wedge, splitting the leg piece down the centre. Where the side consists of compact rock, so that the whole of the side pressure can be opposed by the resistance of the cap piece to crushing or bending, this kind of joint answers very well. Where, however, owing to the loose or broken nature of the side, the side pressure is distributed along the whole length of the leg piece, some special provision must be made to prevent the legs from being forced inwards, since in the simple form of the joint this side pressure is resisted solely by the friction of the surface of contact, which will be found insufficient in most cases for this purpose. To prevent the legs being forced inwards three methods are adopted. The first is the insertion of a cap wedge between the top of the leg and the cap piece. In order, however, that this means shall be effectual it is necessary that the friction between the wedge and cap piece shall be greater than the side pressure. The friction is dependant on the amount of vertical pressure between the wedge and cap piece, which it is expected will be proportionately increased by the resistance of the cap piece to the tendency to raise it as the leg is forced inwards under the cap wedge. In many cases, however, it occurs that the cap wedge itself is forced inwards with the leg. The second method of preventing the legs being forced inwards is to drive a nail into the under side of the cap piece close to the leg. The nail is formed of a plate of iron, about 5 in. long, 2 in. deep, and ⅜ in. to 1 in. thick, provided with a point in the middle of its length (giving to it the shape of a T), to enable it to be driven into the wood. The nail is inserted crosswise to the length of the cap piece. The comparatively small depth of the rectangular head of the nail effectually avoids all liability to its being broken off, The last and the most effectual method of preventing the legs being forced inwards by a side pressure is the insertion of a horizontal strut placed immediately beneath the cap piece. The ends of this cap strut being hollowed out (in the same manner as the upper ends of the legs), so as to fit the cylindrical form of the legs. The principal objection to this arrangement is that the cap strut is liable to be split lengthways along the centre, in the case of excessive side pressure, the round form of the legs causing them to act as wedges. The chief advantage in this method of connecting or joining the principal timbers by notching lies in its simplicity, and the ease with which it can be made and placed in position, and when necessary again loosened.

2.—SCARFING: The most usual example of the scarfing of two timbers together is that between the cap piece and one of the side supports of a door set. This is generally made by forming with a hand saw or chisel a cut about 3 in. from the top end of the prop, and 2 in. deep. The portion of wood between this cut and the end of the prop is taken off by means of an axe or adze, and the rectangular surface thus formed, and which when necessary is made more regular and flat, by means of a chisel or the adze, is called the face. The small flat segmental surface formed by the saw cut is called the cut, and the top end of the prop, which thus forms a segment of a circle (greater than a semicircle), is called the head. About 5 in. or 6 in. from the end of the cap piece a similar notch, 3 in. deep, is made with the hand-saw, and the piece between this and the end of the cap is likewise removed by means of the adze, forming a rectangular surface, which fits on the top or head of the prop, and is called the scarf. A short flat piece, called the flat, is cut on the under side of the cap, close to the cut of the cap; the flat should fit close on the cut of the leg piece. The length of the scarf of the cap is equal to the diameter of the prop, minus the depth of the cut of the prop; and the length of the face of the prop, on the other hand, is equal to the depth of the cut, minus the depth of the flat. In the case of all door sets these surfaces are, perhaps, best cut parallel to and at right angles with the axis of the cap; and this may be and usually is so, even in the case where the legs of the door set are wider apart at the bottom than at the top; the head of the prop, however, must then be cut inclined to the axis, at the same obtuse angle as that included between the leg and the cap. The face of the leg and the cut of the cap may be cut either parallel to the axis of the leg or at right angles to the axis of the cap.

This form of scarfing is the most general of all, and is designed chiefly to resist a downward (the most usual direction) pressure on the cap, since the cap rests upon the cut of the leg in its entirety. In order to break down the cap it must be broken across the whole section of the cap. A side pressure upon the legs, however, has only to overcome the resistance of breaking the legs offered by the diminished (by the area of the cut) section of the legs. This side pressure is more seldom, and then generally less, than the vertical downward pressure. In order, however, to meet the exigencies of such a case, where the side pressure is considerable the cut in the legs is made deeper, and the face so much larger that it forms the scarf; whilst the cut in the cap is made much nearer (about 2 in. to 3 in. from) the end of the cap, the scarf being so much diminished in size as to form the face, the end of the cap now abutting against the scarf on the leg, and the face of the cap abutting against the flat which is cut on the leg. With this arrangement a side pressure would have to shear the leg across its undiminished section, with which it presses against the cut of the cap. It appears, however, more probable that any pressure on the cap in a downward direction, or of a sufficiently great side pressure, which could shear or break the timber across the diminished section over that portion—of which the scarf forms the flat surface—would be quite capable of splitting either the under side of the cap or the inside of the leg close to the joint. In many of the Saxon mines this diminution of the section of the leg piece is compensated for by placing the thicker end of the leg upwards; the leg pieces, however, on account of their necessarily greater length are of a larger diameter than the cap piece, and in consequence of their weakening to form the joint they are practically of the same dimensions throughout, and often still stronger at the foot than near the head.

As a very practical modification of the above kind of joint may be mentioned one usual in the timbering at the Ischl salt mines. The cap piece contains a scarf, as usual. The inner end of the scarf is terminated by an inclined instead of vertical cut. To correspond to this the top of the leg has only an inclined cut on the inner side, which abuts against the inclined cut on the under side of the cap piece, the scarf of the cap piece resting solidly on the head of the leg piece. This arrangement obviates the liability, to any great extent, of a strong side pressure splitting the under side of the cap piece, or of a great downward pressure splitting of the inner side of the upper ends of the leg pieces. In a somewhat similar arrangement, described by Ponson, Traite, vol. 1, p. 345, the cap piece is scarfed, and cut in an inclined direction, exactly as above; the leg piece, however, receives no cut whatever, the scarf of the cap piece resting on the undiminished area of the head of the leg piece. Where the vertical and lateral pressures are equal the cap piece receives two vertical saw cuts, one about 7 in. or 8 in. from the end, and another of about twice the depth at from 5 in. to 6 in. from the end of the cap piece, which has thus, as it were, two scarf surfaces on the under side of each joint. The top of the leg piece has, in addition to the face, only a flat cut on the inner side, the lines of the joint having a step-like arrangement. This form is not to be recommended, since it possesses no advantage over the first two forms above mentioned, and requires more time, and is more difficult to form accurately. In such a case, where the vertical and lateral pressures are nearly equal, it is more advisable to alternate each door set with the first two forms of joints than resort to that just described.

In cases where the vertical pressure is very considerable, and the latteral pressure comparatively slight, the cap piece is not cut at all, and the leg piece receives a saw cut to nearly half its depth at a distance from the end equal to the diameter of the cap piece. When the side pressure is considerable, and the vertical pressure slight, the leg piece is inserted uncut (with the exception, perhaps, of a flat on the inner side), the cap piece receiving a vertical cut on the under side, in depth equal to nearly half its thickness, the scarf thus extending over the whole area of the uncut end of the leg piece. Both these forms are liable to the objection that in case of considerable pressure the cap piece is liable to split off on the under side close to the joint in the first case, and in the second case the inner side of the leg piece will be split off close to the joint.

As a simple modification of the above description of joints may be considered that in which two pieces of timber meet together, the joint being formed by the simple abutting of two flat surfaces together. The section of the joint is thus represented by a single straight line, which should form with the axes of both leg and cap pieces equal angles; this in the case where the cap is laid horizontally, and the leg vertically, would be at 45° to the perpendicular. The security, or rather the stability, of an abutting joint depends on the area and roughness of the two surfaces in contact, and on the equilibrium of the side and vertical pressures. In the case where the pressures are unequal (say, for example, the vertical pressure being by far the greater of the two) the tendency would be to force the cap piece down as a wedge, and the legs outwards. Should the latter give way, and be forced slightly outwards, so that the cap piece is lowered, only the upper portion of the joint of the cap piece would be abutting on the leg, and would then be readily split off on the upper side. Such a joint is not often met with among the principal pieces of a set of timbering, more usually amongst the accessory timbers.

3.—TENONING: This is the least suitable method of connecting the principal pieces of a set of timbering that can be employed underground; and this chiefly on account of the great pressure to which timbering in mines is subjected, since this very method necessitates in a greater degree than either of the two previous ones the weakening of the timber at the place of junction. It has, besides, as pointed out by Sickel, the great additional disadvantage that in the case of pressure on all sides it is impossible to loosen a set of timbering connected with mortise and tenon joints without breaking at least in two or three joints the tenon, so that when it is desired to replace the set, or use the same timber, those pieces of which the tenon has been broken cannot be used again for the same purpose, and a fresh piece of timber must be obtained, in order to be able to cut the tenon out of the solid. When tenoning is resorted to for the joints of a door-set the tenon is almost invariably formed in the top of the legs, and the mortise in the cap.

When single timbering is used for supporting levels the single pieces receive and directly oppose the pressure. There are two principal ways in which the pressure may act and be opposed, either along the axis of the timber or at right angles to it—that is, in the first case the timber is subjected to a thrust or compression, and in the second to a tension and shearing strain. In the Saxon mines the former are called props, and the latter bars or stempels. In many of the mining districts of Germany both are included in the common name stempels, the latter being, however, distinguished by the special name "overhead" stempels, in Bohemia as cap pieces. In the latter district a stempel is simply a long prop. In this country the term stempel appears to be limited to props, or struts laid across from the hanging to the lying wall of a lode, and is, perhaps, not met with except in metalliferous mines. In many cases in metalliferous mines a stemple or prop has not only to support the hanging wall, but also a certain amount of superincumbent weight of attle packing, and here acts not only as a prop but also as a cap piece. In the course of these lecture notes we shall retain the word stemple in the extended meaning of the German term, and for which we shall also used indifferently the term prop, and occasionally as a distinctive name the term cap piece for the corresponding German overhead stempel. In the majority of cases both in mines of stratified deposits and in metalliferous mines the stemples or props are placed in rows; more rarely, and especially in coal mines, the props and caps or bars are placed singly in the levels or in the working places, where it is ascertained by knocking that there is any loose piece which requires to be kept up, or which if not kept up might offer opportunity for the fall of a considerable amount of rock. Whenever the object can be attained by the use of a cap piece or overhead stemple this is much more advisable than the use of a couple of props, which besides often requiring more labour in fixing have the great disadvantage of narrowing considerably the levels.

HORIZONTAL STEAM-ENGINES.—At the Society of Engineers on Monday (Mr. J. Bernays, Vice-President, in the chair) a paper was read by Mr. W. Schönheyder on "Equalising the Wear in Horizontal Steam Cylinders." The author after noticing the large extent to which the horizontal engine was used at the present time in preference to the older type the beam engine, explained that one objection to its use was the great and unequal wear of the cylinder, which was due to the weight of the piston continually rubbing backwards and forwards on it, and to the difficulty found in lubricating it sufficiently, especially when the cylinder was kept hot by the now universal steam-jacket. After enumerating the evils resulting from the unequal wear of cylinders and pistons, the most important expedients for preventing it were described, and the author's reasons given why they could not fulfil their purpose in practice. The author then gave a description of his method of remedying the evil. This was stated to consist in making the piston-rod with a camber or upward bend in such a manner as that when loaded with the weight of the piston and placed in the cylinder, it assumed a straight line, and transferred the weight to outside guides. Special tools are used, which render the production of these rods easy and certain.

GOLD FRAUDS IN SCOTLAND.—At the recent meeting of the Glasgow Geological Society Dr. W. L. Lindsay read a paper on "Australian Gold Quartz in Scotland," in which he referred to two specimens of gold quartz, the one in the Museum of Science and Art, Edinburgh; the other in the Museum of the Archæological and Physical Society of Bute, at Rothesay. The first-named specimen (by far the more important of the two) bears the following printed label:

"Auriferous Quartz.—Found by A. Gemmell, miner, at Wanlockhead, in 1872. This specimen was unfortunately broken up by the finder, and the different pieces came into the possession of his Grace the Duke of Buccleuch; Mr. Clark, of Sped doch; Mr. Dudgeon, of Cargen; Dr. Grierson, Thornhill; and Mr. Stewart, Wanlockhead, who have presented the restored mass to the Museum of Science and Art, Edinburgh."

The Rothesay Museum specimen bears on its label that it is—

"Bute gold, presented by Mr. Lindsay, 'Argyle Place'" (that is, Rothesay).

In the first case the presumptive evidence that the specimen is Australian and not Scottish is mainly this:—That nothing was heard or seen of it, though a lump variously stated at from 3 lbs. to 20 lbs. weight, till the morning after a collection of pieces of Australian gold quartz [belonging to a miner in the village of Wanlockhead, and which had been brought from Australia by himself, or some of his brothers, who had been engaged in gold mining there] was trundled in a hand-barrow up what is known as the Landlord's Brae of Wanlockhead. It is quite inconceivable to me that the found specimen could have lain where it did lie—on the side of the road up which the said collection had been trundled on the preceding evening—prior to the said evening, without having been found. We have the evidence of the Rev. Dr. Porteous, of Wanlockhead, whose manse looks down upon the spot where the specimen in dispute was found, and who collected on the spot all the available evidence—(1) That it is the general belief of the inhabitants of the district that the found specimen is foreign. (2) That it has the character of the Australian gold quartz alluded to; while (3) it has not the characters of the prevailing quartz of the Wanlockhead. Just as in the Wanlockhead case, there is no such thing as a genuine piece of Wanlockhead gold quartz with which to compare the pretender; there is no such thing as a genuine sample of Bute gold quartz with which to compare this Rothesay find. On the other hand, in both cases the specimens found have the common naked-eye characters at least of hosts of samples of common Australian gold quartz.

THE IRON AND STEEL INSTITUTE—No. II.

In the discussion which followed the reading of Mr. BELL'S paper (an abstract of which was published in last week's Journal), Prof. WILLIAMSON remarked that although from merely hearing the paper read he could not presume to go into the analyses, many of the results appeared to be of considerable importance, and especially that of proportioning the oxide. Members would be perfectly well aware that in the process which Mr. Bell described the oxide of iron had to perform two distinct functions; one part of the oxide of iron had to supply oxygen to the phosphorus, and the remainder had to keep hold of the phosphoric acid which had been thus formed. He understood that the quantity of oxide of iron required to remove the phosphorus from 1 ton of pig-iron was something considerable—10 cwts.—and he had no doubt it had occurred to Mr. Bell to diminish the amount of oxide of iron by replacing it by lime or some other oxide of little value. They would thereby favour one condition—the fluidity of the mass. He had little doubt that Mr. Bell had had occasion to replace some of the oxide of iron by other bases.

Mr. SNELUS said that six years ago he took out a patent for using lime for the lining of puddling and other furnaces. The patent was still valid, and he had refrained from saying anything about it at these meetings, because he knew the value of the essence of the thing, and for the last six years he had been trying to devise some mechanical means for applying it in practice. He believed he had succeeded now in doing so, and he should not have risen on the present occasion, nor, indeed, until it had been perfected in practice, had it not been that Prof. Williamson had raised the question as to the effect of using another oxide in order to do the duty which Mr. Bell made the oxide of iron do in double proportion. He had casually told a good many members of the Institute six years ago that he had succeeded in reducing phosphorus in Cleveland pig-iron to under 0·1 per cent., using limestone as the lining of his furnace. He had seen Mr. Siemens' revolving furnace at work at Birmingham, but there was a difficulty in using it. It occurred to him that the difficulty was—he thought still as he thought then—that it was simply one of temperature. The revolving furnace was not an instrument in which, so far, Mr. Siemens had been able to get up a very high temperature—certainly not so high as he had been able to get in the fixed melting furnace, and the consequence was that in the experiments which were tried at Birmingham the lining material of lime did not get sufficiently heated to get hardened, and that involved a difficulty of the lime falling off and mixing with the ball of iron, and there was considerable difficulty in dealing with the material under those circumstances. Previous to that he had himself lined a Bessemer converter with limestone, and he might mention that the result he got there from 3 or 4 tons of iron so treated perfectly corroborated the facts that he had ascertained in dealing with 1½ cwt. of iron—that the phosphorus was almost perfectly eliminated under those circumstances. In the Bessemer process he thought there were practical difficulties in applying the lime in a Bessemer vessel—there were practical difficulties in applying it in Mr. Siemens' rotating furnace, and those difficulties he had been beating his brains about for several years past in order to overcome them, as, he said, he hoped he had overcome them now, and he hoped soon to have the opportunity of putting the thing into practical operation. He mentioned at the last meeting, at Newcastle, to Mr. Bell that although the question of temperature, under the circumstances in which Mr. Bell tried it, might have a great effect in reducing phosphorus in the iron, the question of temperature was not the sole cause; because, as he told him, he had succeeded in removing the phosphorus at the temperature of the Bessemer process, the metal at the end remaining perfectly fluid; but there was the difficulty of constructing a practical apparatus in which the limestone would be used; but he had such confidence in the ultimate success of that material for the purpose for which he designed it, that he intended to maintain his patent, although it was six years old, and the seventh year's fee would soon have to be paid.

Mr. RILEY hoped metallurgists would come to some decision as to the amount of phosphorus which it would be possible to have in a steel rail without injuring its quality. In Great Northern rails as much as 0·274 per cent. of phosphorus had been found. These rails he believed were still down, and would, therefore, have been down six years. But he believed it essential that the carbon should be below 0·300. He would also raise the question as to the mode of estimating phosphorus. Some short time since he analysed some rails for the Indian Government, and the manufacturers found fault with him for his determination of the phosphorus—he found too much; it was below 0·1 per cent. He thought it most desirable that the different methods of determining phosphorus should be rigorously tested. Upon that he prepared some pure peroxide of iron, and a salt of phosphorus. He weighed in a known weight of phosphorus into the quantity of iron operated upon in an ordinary analysis, and he tried it by one method known as the magnesian method. Five other chemists operated upon unknown quantities of phosphorus, and each of them found the phosphorus—the error was below 0·01 per cent. He then took some of the peroxide of iron and put a known weight of phosphorus into it, and sent it round to some of their best chemists, who were constantly in the habit of determining phosphorus, and the result was that they all agreed that the phosphorus was 20 to 25 per cent. too low in every case, thus showing that the molybdate method did give considerably less phosphorus (especially in small amounts) than the magnesian method.

Mr. SNELUS elicited that in all cases the molybdic precipitate was redissolved, and not weighed direct, as suggested by Eggertz and Percy.

Mr. BELL understood that 0·07 or 0·08 obtained by the molybdate process meant, according to Mr. Riley, a real content of 0·1.

Mr. RILEY said that was the case. He could place little reliance upon experiments made upon the same bar, and the same results obtained, because in the steel rail in question the analyses agreed, but there he did hold that they must be correct, as he actually took and weighed the phosphorus into the iron, and the same phosphorus was found exactly by the one method and not by the other.

Mr. PRICE, of Woolwich, said they had been trying the working out of Mr. Bell's process, and found that by it Cleveland iron would make good steel, both hard and soft; it contained 0·2 per cent. of phosphorus, 0·2 per cent. of carbon, broke at 3 tons, and stretched 25 per cent. They could also make good malleable steel from it. The forgings shown were all from Cleveland pig. As to the loss in the refinery it amounted to about 2 or 2½ per cent., but he estimated that this was compensated for in the steel furnace by getting therein a higher percentage than in the usual process. They had made shaftings up to 25 cwts., but their furnaces were not adapted for larger castings. As to its fusibility, it melts almost as readily as hematite pig, and they had found no difficulty in melting down the steel.

Mr. SIDNEY THOMAS thought it might be interesting to the members to know that he had practically succeeded in entirely removing phosphorus by the Bessemer converter. Of course that statement would meet with a smile of incredulity—gentlemen would scarcely believe it, but he had the results in his pocket of more than a hundred analyses of different experiments, varying from the very small quantity of 6 lbs. up to 10 cwts., and the results all carried out the theory

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* Being Notes on a Course of Lectures on Mining, delivered by Herr Bergrath, Dr. VON GRODDECK, Director of the Royal Bergakademie, Clausthal, The Harz, North Germany.

with which he originally started, and showed that in their worst results 20 per cent. of phosphorus was removed, and in their best he must say that 99·9 was removed, and they hoped they had overcome the difficulties that had hitherto stood in the way. He hoped to lay the results before them at a future time.

Mr. FRANCIS FOX suggested the formation of a committee to investigate the subject, and enquired whether it might not be possible to treat phosphorus as a valuable residual product.

The CHAIRMAN said that Mr. Bell had certainly contributed some valuable facts. He found that he could, by treating Cleveland pig metal in a rotary furnace, such as they saw at the Clarence Works, reduce the phosphorus to the extent of from 0·3 to 0·4 per cent. But other results had been given, showing that the phosphorus had been reduced below 0·1 per cent. The slag produced gave 0·6 and a fraction per cent. of phosphoric acid, he supposed, whereas the phosphorus in the metal in that case had been reduced to 1·7 per cent. Now, as regarded these two figures, they agreed very much with the results which he found in treating the same subject in another way. At Towcester, in the rotative furnace, the slag generally was found to contain up to 0·8 per cent. of phosphoric acid, but the metal produced in that process had been brought down to a very low percentage; indeed, so far then they might consider it as an accomplished fact that, whether they dealt with pig metal or whether they dealt with ores containing a large percentage of phosphorus, the phosphorus could be eliminated to such an extent as to make that metal perfectly applicable for the production of steel. The question of the relative merits of the two modes of doing it was one of expense, and on that subject they were still without sufficient information. Mr. Bell gave them certain data, commencing with Cleveland pig metal. He subjected that metal to a refining process, and in that operation he used 10 per cent. of oxide of iron. Now, without wishing in any way to discourage Mr. Bell and his friends, he thought that he would have to modify that process before he could tempt steel manufacturers to use it practically. The employment of 10 cwt. of rich oxide of iron would form an item of expense altogether out of proportion to what now was practically admissible—10 cwts. of rich ore of oxide could not be valued at less than probably 10s., and adding to that the cost of the operation itself—the fuel used—he thought there could be no margin in favour of using the cheaper Cleveland metal as compared to the dearer Cumberland metal; but as Dr. Williamson had said, other bases might be found to take the place of iron. and Mr. Snelus had brought before them a scheme which he had been working out in substitution of lime for lining. The difficulty they encountered at his (the Chairman's) experimental works at Birmingham was that they could not get sufficient heat to consolidate the limestone. As to phosphorus in the steel there was no difficulty in converting old rails, even Cleveland rails, into steel rails, which would bear the falling weight test, but there must not be more than 0·25 per cent. of phosphorus, and 0·2 per cent. of carbon, and it ought to contain 0·7 of manganese certainly. He considered manganese was to a steelmaker what charity was in religion—it covered a multitude of sins, and those things were of a lucifer kind—phosphorus and sulphur. If they gave him the worst class of iron and wished him to make steel out of it that would stand the Admiralty test he would undertake to do it; but such steel should nevertheless be fused in such applications as were now contemplated of mild steel. No boiler should be made of it, no forgings should be made of it, and he thought also no shaft should be made of it—steel of that description depending upon its mechanical quality, upan the large dose of manganese which it contained. Now, every practical steelmaker knew that manganese was a somewhat treacherous element in steel; its distribution was never so uniform as to make a complete substance the same from one end to the other; then in the working of a plate containing that amount of manganese, the manganese was apt to work out. In annealing such a plate it became wrong, and if it was attempted to flange it, it would now and then stand the test, at other times it would break. That was a question which he thought the users of it should direct particular attention to in order to prevent failure in the application of that comparatively new material. Good mild steel such as could be safely recommended to the boiler-maker should contain only some traces of manganese, one-tenth per cent. of manganese was about the limit which he considered such steel could carry without the risk of failure, when that material had to undergo certain percolations in order to put it into its definite shape. Then, again, they had heard a great deal of the liability of mild steel to corrode, and some results which had lately come to light seemed to throw a great doubt upon the desirability of using mild steel, especially in the Navy; but he believed that that tendency to corrode was also the result of excessive manganese. Some experiments which he had himself made went certainly in confirmation of that view, that as the manganese in mild steel was increased so its liability to corrosion increased—that was a subject as to which he quite agreed with the suggestion that it should be carefully enquired into.

Mr. BELL, in replying to the whole discussion, said that with regard to the quantity of the oxide he would call attention to the fact that he had merely assumed 10 cwts. as a hypothetical quantity. He might instance that in the event of their considering 6 per cent. of phosphoric acid to be the extent to which that substance could be permitted to exist in the resulting cinder, then they must expect to have to use 10 cwts. of oxide of iron, but he was bound to confess that the quantity used by his friend, Mr. Price, had been very much less than that. If he were to tell them not one-half had been used to the ton of iron, he would still be within the mark. With regard to the desirability of having two bases in the resulting salt, to speak chemically, of course, to that he had not been inattentive, and the meeting perhaps would remember that when he read his last paper he mentioned the use of Cleveland ironstone as a purifying agent—calcined Cleveland ironstone—which Cleveland ironstone was used for the express purpose pointed out by Dr. Williamson. With regard to the use of lime in a puddling-furnace, of course he had not had the privilege of seeing the experiment referred to by his friend Mr. Snelus, but he might say that he let the Walker Ironworks in the year 1850, which was, therefore, 27 years ago, and at that time the application of iron ore as a material for fettling was a thing that they never heard of before, and almost the only foreign material that they ever were permitted to introduce into their puddling-furnace was limestone. The entire fettling of the puddling-furnace at Walker for at least five years anterior to the year 1850 were performed exclusively with limestone. Of course its application to the Bessemer converter was a matter new to him, of which he knew nothing, and, therefore, would say nothing. With regard to what fell from Mr. Riley, there was no doubt it was a matter of great importance that correct information should be obtained with regard to the maximum amount of phosphorus which could be allowed to exist in rails. He thought his colleagues on the North-Eastern Railway board had taken perhaps the best, if not the only, method of obtaining a satisfactory result. He might mention, for the information of steelmakers present, that all the rails delivered to the North-Eastern Railway Company were analysed, and a careful record kept of the composition of every lot of rails delivered into their yard. Of course, they required time to ascertain how far the fact of phosphorus would be made to agree with the fact of their durability. That of course time only could tell. With regard to the method used in analysis, he was bound to admit that they used that which had to some extent been impugned by Mr. Riley—the ordinary molybdate process.

Mr. RILEY denied having condemned the molybdate process.

Mr. BELL did not wish to play upon words, but really, when a chemist of Mr. Riley's position told them that a mode of analysis, when followed, did not come true within 25 per cent., he must say if that was not condemning it he did not know what it was. However, he was willing to accept the explanation of his friend, but would say this, that inasmuch as the mode of analysis was uniform in all cases it was the same applied to good rails as well as to bad. As to the question of the quantity of oxide required, of course, as they very properly put it, the whole value of the thing was what it was good for. He might appeal to Mr. Bessemer, and ask him whether, if he had been asked at the end of six months after the first introduction of his world-wide known process, he would have liked to have been held to anything he had done six months before. He admitted, no doubt, that there were points which no one could be expected to grasp at once. If he proposed, for instance, to use a quantity of gold or any very expensive material in the operation in question, and that quantity of gold or expensive material amounted to more than the value of the improvement, then of course he must make his bow and go. But he did not think he had arrived at that; he thought they might do with a very much less quantity than he had mentioned himself, and which Dr. Siemens had referred to. He would also take exception to the value of the material. He had assumed that it was going to cost 10s. Half of the material they had used was made of cinder, worth 3s. 6d. a ton, and he was by no means prepared to say that the material which they had used was absolutely valueless. No doubt it would come from the purifier contaminated with a great deal of phosphorus, but if they could propound a scheme by which the phosphorus conferred upon the material so used could be readily taken away from the iron made, it was a question whether they were to consider the whole as iron lost. What the President had said with regard to the use of old iron rails rather confirmed him in the hopes that he still (notwithstanding his gloomy anticipations for the future) seemed to indicate—that good rails apparently might be made with any quantity of phosphorus, provided, as he himself had of course admitted, they contained a less amount of carbon.

On some Recent Improvements in the Manufacture of Iron—

SPONGE BY THE BLAIR PROCESS.

In a paper on this subject Mr. IRELAND, engineer, Manchester, said that the object was to describe the improvements which have recently been made in the working plant, and also in the method of treating the ore. The iron sponge reducing furnaces erected at Pittsburgh were designed to work when the ore under reduction took about 30 hours to bring to a metallic state; but in the early part of 1876 Mr. Blair discovered during some experiments that by the addition of a small quantity of alkali to the carbonaceous matter mixed with the ore, the action of reduction was quickened to a remarkable extent, and ore which took 30 hours to reduce without alkali, could be perfectly done in 6 hours with it. Subsequent investigation showed that lime in a fallen state answered as well as any other alkali, and on account of its cheapness was most suitable for the purpose. The quantity of lime required being only about 5 per cent., the extra cost was quite insignificant when placed against the great saving in time. When, however, Mr. Blair came to work the existing furnaces under the new condition of quickened reduction, he found the arrangement could not in any way be altered to suit it. The new form of reducing furnace adopted by Mr. Blair has several important features. A vertical retort made of fire-bricks, with an external wrought-iron casing, stands upon a cast-iron entablature supported on columns. The retort is continued below the entablature by a wrought-iron cylinder with water jacket, or as the writer proposes, instead of one wrought-iron cylinder and water jacket, four small ones are suspended, and thus split up the hot sponge into small columns, by this means effecting the cooling much more quickly. At the lower extremity of each water jacket is a conical mouth-piece and valve, so that the iron sponge can be discharged periodically into any receptacle placed under. The lower part of the retort from where the gas is admitted is larger than the upper portion. This is done so as to form an overhang immediately above the aperture where the gas is admitted, thus forming a chamber round the mass of ore, &c., and allowing the gas to permeate it uniformly. At the top of the retort is an outlet for the escape of the gas after passing through the ore, which is connected by a horizontal pipe to a vertical one descending to the ground, and there connected to the chimney flue. In the horizontal pipe above named a steam jet is inserted, so as to form a vacuum in the top part of the retort, to induce a regular current of gas through the ore, &c. The retort is fed by an ordinary bell hopper.

The carbonic oxide is generated in a gas-producer placed a few feet from the reducing furnace, and connected to it by a flue of sufficient capacity. The gas producer is circular in section, formed of wrought-iron plates, lined internally with fire-bricks, and standing on an entablature, which in turn is supported to the requisite height by columns of brickwork. Below the entablature, and suspended from it, is a wrought iron continuation tapering to a conical discharging valve for allowing the ashes to be from time to time removed. Apertures for admitting air for combustion in the gas producer are placed in its circumference fitted with slide covers to regulate the admission of air. A reducing furnace of this description, 5 ft. diameter and 40 ft. high, will reduce 60 to 70 tons of ore to a metallic state weekly, and the cost is about 600*l*.

The cost of producing iron sponge by this process will vary according to the locality in which the work is carried on, but with the large reducing furnaces mentioned the cost will be about 22s. per ton exclusive of the ore. It is, however, confidently expected that where several of the furnaces are in operation the cost will be less. The question of the subsequent use of iron sponge is an important one. Where the ore is rich and pure iron sponge made from it can be at once made into tool steel, the quality of which cannot be equalled by that made from the best brands of Swedish bars. In the case of ore which is not so rich, but still suitable for steel making, the writer is of opinion the best way of utilising the sponge made from it is to melt it in a cupola furnace into pig metal, and while in a molten state pour it into a Siemens'-Martin furnace, and in this way convert it into steel. The pig metal obtained in this manner will contain about 1·5 carbon, and practically no silicon, the greatest amount of the latter yet found by analysis being 0·25, and the lowest 0·19. If this metal is poured while molten into an open hearth furnace, as proposed, there ought to be no serious difficulty in getting six heats from each furnace in 24 hours in place of the two or three heats now obtained. Iron sponge melts readily in a cupola furnace, and the risk of oxidation is less than when it is thrown into a bath of pig-iron in an open hearth furnace. The same remarks apply to the manufacture of wrought-iron. From the nature of the particles of iron in iron sponge being so minute it cannot be balled up in an ordinary balling furnace without considerable oxidation; on the other hand, if melted in a cupola furnace the resulting metal containing so little carbon and silicon, if taken in a molten state from the cupola to the puddling furnace, very little rabbling brings it to nature.

The molten metal can be made almost as cheaply as pig-iron—in fact, there is no reason why it should not be made as cheaply. The first outlay in plant and the wear and tear are reduced to a minimum. To produce 100 tons of the metal per week, the cost of plant will be about 2500*l*.—two reducing furnaces, two cupolas, fan or blower, small engine and boiler, hoist, and ore-breaker being all that is required. There are many points not touched upon in this brief and somewhat imperfect description of the process and apparatus, but the question is one worthy the consideration of iron and steel makers.

With regard to the action of the lime in accelerating the reduction of the ore to a metallic state, it certainly is a great help forward in the manufacture of iron sponge. What its chemical action is has not been clearly demonstrated; but it is remarkable that so small a quantity of it should produce such a great acceleration. Perhaps some of our chemists can explain the phenomenon.

Mr. BAKER said that as there were about 600,000 tons of this waste material in England to which this process was applicable, it seemed to be a very interesting matter. If ores can be so reduced an effort ought to be made to reduce them. He suggested that during the process cyanogen was produced.

Mr. RILEY remarked that as to purple ore it retained from 1¼ to 3 per cent. of sulphide of lead, which in the furnace becomes sulphide of iron. As you thus get sulphide of iron and metallic lead the process would not be applicable to purple ore.

Mr. SNELUS said that having seen the process at work at Mr. Ireland's he might say a word in favour of it. He could answer that the reduction was very perfect, and it appeared to be rapid. As to the question of the use of the lime he suggested that it led to the production of the cyanide. Much credit was formerly given to cyanogen—probably too much, as they would remember—but we had now probably gone to the other extreme.

Mr. E. WILLIAMS did not doubt that the chemists were correct in their views, but the question was whether the process would be cheaper. He believed from the description given that it would not bear comparison with either the Bessemer or Siemens process of making iron rails.

Mr. BELL said he had examined Blair's process in America, but was not struck with it. Mr. Blair did not succeed in producing a mass of metallic iron. Round about as the blast furnace process might appear to be he doubted whether any other process could compete with it. He doubted whether iron sponge would compete with pig-iron. So large a surface is acted upon by the atmosphere that it very readily heats spontaneously, and returns to the oxide.

The CHAIRMAN remarked that the question of converting ore into spoongy iron was not new. It was long since proposed by Mr. Clay. Then there was the Chenot process, of which they heard so much, and there had been many other attempts. There were several difficulties which made him desist from producing it. The iron sponge locks up with it all the earthy materials, and prevents liquefaction; the iron sponge also very readily absorbs sulphur from the flame. Even the purest coke gas will render the iron sponge unsuitable for the steel furnace. He failed to see the advantages of melting the sponge in the cupola, as you have the iron sponge in the blast-furnace at a certain height ready to be melted in the lower portion. He found that in the production of iron sponge the iron and earthy matter were simultaneously reduced.

Mr. IRELAND, in replying, explained that the process was particularly valuable with friable fuel and refractory ore, and they got quite as good a yield as from the blast-furnace. As to the melting of the sponge, the object had been to produce a metal as free from carbon (say) 1·5; and with not more than 0·25 of silicon, which could be more readily made into steel. With the iron sponge six heats in 24 hours could be got out of the Siemen's-Martin furnace. As to taking up sulphur, it was no doubt sensible both to oxidation and to sulphur, but coke with ½ per cent. of sulphur does not affect the sponge.

Mr. MICHAEL SCOTT, M.I.C.E., read a paper on "Steel Casting Apparatus." This consisted of a revolving spout attached to a crane.

Mr. MENELAUS said they found it difficult to go on with the old system in the present market.

Mr. BESSEMER feared there would not be a great demand for the alteration.

Among the other papers read were those "On Rail Joints," by Mr. C. H. Halcomb, Sheffield; on "The Manufacture of Bessemer Steel and Steel Rails at the Works of Messrs. Brown, Bayley, and Dixon, Sheffield"; and on "Statistics Respecting the Production and Depreciation of Rails, and Notes on the Application of Wrought Iron and Steel to Permanent Ways, with a Description of a new kind of Railway Sleeper and Chair."

CANADIAN NICKEL.—At a recent meeting of the American Institute of Mining Engineers, at Philadelphia, an interesting paper was read by Mr. W. EUSTIS, B.A., on the "Nickel Ores of Oxford, Quebec, Canada." This deposit was first described by Dr. T. Sterry Hunt in 1863, when he stated that the general diffusion of nickel throughout the magnesian rocks of the Quebec group has been already noticed. It has, however, never been met with in any considerable quantities in these rocks, although workable deposits of ores may reasonably be looked for in some parts of their distribution. On the sixth lot of the twelfth range of Oxford the sulphuret of nickel (millerite) is met with in small grains and crystals disseminated through a mixture of green chrome garnet with calcspar, and through the adjacent rocks. Explorations were made at this place a year or two since in the hope of obtaining copper, which was supposed to be indicated by the brilliant green of the garnet or lead, small quantities of which are found in the vicinity. The ore of nickel is sparingly disseminated in small grains through the garnet and calcareous spar, and the masses submitted to analysis did not yield more than 1 per cent. of nickel. It is, perhaps, doubtful whether this small quantity could be extracted with profit. The vein consists of green chrome garnet, calcite, and millerite, and Mr. Eustis states that 508 lbs. of the ore, with no flux whatever, were run through a small blast-furnace about 1 ft. square inside and 4 ft. high, gas coke being used as fuel. Ten minutes after the ore was charged into the furnace slag appeared at the tap hole. The whole charge was run through in 2½ hours; 145 lbs. of coke were used, making about 3·5 of ore to 1 of coke; 8 lbs. of this matter or alloy were obtained, containing—

Iron ..... 71·84 per cent.
Nickel ..... 22·70 per cent. — 94·54. Fe and Ni — 94·54 per cent.

The ore treated was a very lean lot from near the surface, probably not containing ½ per cent. of nickel. The slag had a mere trace of nickel.

UTILISATION OF MIXED ORES—No. II.

TREATING AND SEPARATING CERTAIN COMPLEX METALLIC COMPOUNDS.

According to the ore to be treated Mr. Maxwell-Lyte uses either a chlorination or a sulphatation process, the first involving a preliminary treatment with hydrochloric acid, then the reduction of the lead and silver by means of zinc, and subsequently the recovery of the zinc. In conducting this acid chlorination process the ore, finely ground and calcined or not as the case may require, is acted upon with moderately strong (not fuming) hydrochloric acid; a mixture of the commercial acid with an equal volume of water generally answers the purpose. The reaction is assisted by placing the mixture in a tub of pitch pine or other suitable material, heated by steam-pipes or a blow-up. The galena and blende, if finely powdered and previously calcined, are chloridised. The zinc goes into solution as chloride, and the lead and silver, which are also converted into chlorides, partially remain with the gangue, and enter partially into solution. The solution soon gets saturated with lead chloride, and being allowed to settle for a few minutes, the liquor is decanted hot into another tub, where on cooling it deposits nearly all its lead chloride. It may now be syphoned back again into the reaction tub, and on reheating takes up a fresh portion of lead chloride. About three successive decantations usually suffice, and the remaining gangue or matrix, being washed out once with boiling water, should contain no longer more than mere traces of lead, silver, or zinc. These washings are added to the acid liquor contained in the decanting tub, and bars of zinc or zinc clippings (the precise material which Mr. Maxwell-Lyte finds to be most convenient for this purpose is hard spelter, which is cheaper than any other form of zinc, and this he casts on to mandrils of iron in lumps of about 25 lbs. or 30 lbs. each), proportionate to the amount of lead contained in the ore, are immersed in the bath, when by the well-known reaction in such cases the zinc dissolves as zinc chloride, and the lead and silver become reduced in a spongy metallic state. In this part of the process zinc passes into solution to the extent of about one-third to two-fifths of the weight of the lead and silver reduced. Chloride of silver is more or less soluble in solutions containing chloride of lead according to their degrees of concentration, and from this circumstance all the silver the galena may have contained is carried over and found reduced together with the lead.

The next step is to obtain the silver-lead in such a condition as to facilitate its desilverisation. For this purpose the metallic sponge of argentiferous lead is rinsed with a little water, the solution of zinc chlorine having been decanted off or separated by a filter press, and may be finally washed and pressed into bricks, to get rid of any superfluous liquid it contains. These bricks of metallic lead may be fused in a reverberatory furnace, with 2 or 3 per cent. of caustic soda or some carbonate of soda, and a little charcoal to preven oxidation, or even fused in an iron pot covered with some red-hc charcoal, and run into pigs of metallic argentiferous lead. It may here be added that in the case of rich ores it may not even be necessary to decant at all; the calcined ore is in such cases first heated for some time with the acid, and the zinc being added the lead becomes reduced, while the blendous portion passes into solution as zinc chloride. The remaining siliceous matter, if not over-abundant, hardly interferes with the fusion of the reduced spongy lead, while in any case the zinc, as before, is found in the decanted solution and the washings. These liquors are now neutralised while cold with some chalk or pounded carbonate of lime; this serves not only to remove any free acid, but likewise to throw down any traces of the sulphuric acid which the liquid almost always contains, some of the blende generally becoming converted into sulphate of zinc during calcination. Having been again decanted it is to be heated once more to boiling, and milk of lime is to be added till the precipitation of the oxide of zinc is nearly complete. A trace of zinc should, however, be left in solution to avoid any possible excess of lime in the precipitate.

The temperature at which the precipitation is effected determines the success or failure of the process, hot precipitation being an absolute essential, because zinc, like its chemical relative magnesia, precipitates as a light flocculent oxychloride when precipitated cold, or at any temperature far below boiling, whereas the precipitate from a boiling solution of the chloride is a dense granular oxide, containing little or no chloride, easily separated by filtration and eminently fitted for distillation. This zinc oxide having been well washed by decantation is then collected, and pressed into bricks, forming a kind of artificial calamine, which when dried contains from 60 to 70 per cent. of metallic zinc, and is ready for treatment by distillation. Thus the whole of the lead is extracted from the most complex mixtures of lead and zinc ores, and all the silver is obtained in combination with the lead, while all the zinc, whether that dissolved in the reduction of the lead and silver, or that which was previously contained in the ore, is also recovered in an available form, entirely free from every trace of lead, and fit to be sold direct to the zinc smelters as if it were a rich calamine already calcined and fit for immediate mixture with pounded coal for distillation. It has been also found by experience that this material, on account of its finely divided state, is more readily attacked and reduced by carbonaceous matter than the natural calcined blende or calamine. The distillation is performed in half the time, and the consumption of fuel becomes thus proportionately reduced. All the processes of decantation above described are best performed by the filter-press. This apparatus, in fact, is the very life and soul of this process, economising time, labour, and space to an immense extent. The value of this acid chlorination process already de-

scribed for the treatment of those mixed ores of lead and blende, which have caused so much annoyance at many mines in this country, will be readily understood. Hitherto the miners have known that the intrinsic worth of the mineral was ample to yield them good profits, but the difficulty of separation has overpowered them; henceforth there is at least a good prospect that these ores will be successfully treated.

FOREIGN MINING AND METALLURGY.

The condition of the French iron trade is still comparatively life less and inanimate. Paris is the only centre which exhibits any activity worth mentioning, because building operations are still being carried on in the French capital, especially in the suburbs and environs. Prices, however, have not revived at Paris any more than in any other French market. The Commission of Organisation established in connection with the Paris Universal Exhibition has just made known the fact—more especially for the information of exhibitors connected with the iron trade—that the weight of the objects exhibited is not to exceed 9 to 10 cwts per cubic metre. For any greater weight exhibitors will have to execute works of consolidation at their own expense. This measure has, as was to be expected, excited numerous complaints. A Commission of 33 members has been appointed by the French Chamber of Deputies to examine questions connected with the establishment of a general Customs tariff. The first meeting of this Commission has just taken place, and it was decided that a preliminary enquiry should be instituted for the purpose of hearing evidence from representatives of French industry and commerce.

Some Belgian industrials have contended that there has not been any revival in the Belgian iron trade as had been asserted, and that the increased number of orders received at the works are only the result of the season, which usually witnesses a renewal of contracts and supplies. Whether this view of matters is correct or not the fact remains none the less clearly established that orders have come to hand more readily of late. Deliveries of articles proposed to be shown at the Paris Exhibition are proceeding rapidly, and exhibitors who have fallen a little in arrear are endeavouring to recover their lost ground. The Marias Works at Montegny-sur-Sombre are being equipped for the manufacture of small plates on the Calleja system to be placed under each joint of rails in the permanent way of railways. These plates are believed to strengthen permanent way very materially, and MM. Pierard Freres and Company have concluded a contract for the delivery of 70,000 of the plates to a Spanish company. The Marais Works are also about to apply themselves to the production of iron permanent way on the Serres and Batteg system.

There would appear to be scarcely any difference of opinion as to the tone of the French coal trade. It is characterised—so far as the Nord and the Pas-de-Calais are at any rate concerned—by very great depression. The basin of the Loire had hitherto resisted the crisis tolerably well, but it has had to follow the general movement. Comparatively little is now being done in this last-mentioned district, and stocks are increasing, although the number of daily working hours is being reduced. A strike at Decazeville has terminated, a reduction of 10 per cent. in wages having been accepted by the miners. The Mokta-el-Hadid (Algeria) Magnetic Iron Minerals Company has just held its annual meeting for 1877-8. The production of 1877 was returned at 360,810 tons of minerals and 121,852 tons of coal. The deliveries of the year were 371,128 tons of minerals and 105,170 tons of coal. These deliveries presented only a comparatively slight variation when compared with the corresponding deliveries for 1876; the deliveries of iron minerals declined, and those of coal increased to a small extent. The profits realised for 1877 enabled the company to distribute a dividend at the rate of 13 per cent. for the year.

Spring has arrived, but the weather has been very cold and unspring like in Belgium; under these circumstances coal for domestic purposes, if it is not in very urgent demand by Belgium, is, at any rate, not by any means neglected. Producers, of course, do not complain of this, but still more seasonable weather would be very desirable. Industrial coal has presented rather more animation in France, although quotations have exhibited little variation. Deliveries have been made with a fair amount of steadiness and activity to France. The Association of Engineers educated at the Liége School will hold its annual meeting at Liége in August, and it is proposed to have on the occasion an exhibition of plans and apparatus illustrating the application of electricity to industry, and especially to mines. The German coal trade does not appear to present much more animation than the Belgian. Thus the sales of coal effected by the Saarbruck collieries in 1877 were 4,404 000 tons, while in 1876 they were 4,450,000 tons, and in 1875 4,473,000 tons. It will be seen that there has been a gradual decline in the sales since 1875.

THE GOLD RUN HYDRAULIC MINING COMPANY.

We shall now proceed to give the result of our investigations of the Gold Run Hydraulic Company. Like others in the neighbourhood this mine was commenced in 1862 washing from the surface. As near as we can ascertain some 20 acres were washed off from 100 ft. to 125 ft. deep, with a yield of something over $200,000. From this level another 150 ft. were washed with a still better percentage to the cubic yard, and running over $200,000. After this came the necessity for the great bedrock tunnel undertaking opening to the American river, which by degrees, in some cases immediately, in others remotely, would command the lowest strata of dirt in every claim. Of this great tunnel enterprise we shall speak more fully in its proper place next week if the weather permits. In the present case it is sufficient to say a connecting tunnel was run 950 ft. long, 8 ft. wide, and 10 ft. high, at an expense of $40,000, which leaves the mine in its existing condition only thoroughly opened for the first time. To the $400 000 already taken out from the top dirt must be added a vast amount of intermediate dirt still to be washed, which it may be reasonably estimated will pay $250,000, and then comes 10 ft. of milling dirt with the bedrock which forms the richest portion of the mine. From this bedrock at the mouth of tunnel, selected because it would be impossible there to play any tricks upon us, we dug up about a wineglassfull of dirt, from which we washed $2·50, and still have the gold in our possession to show. It is by no means difficult for a mining expert to calculate the probable future pay of this mine. In addition to the $250,000 taken from the intermediate dirt by the present company, there is the blue gravel deposit 10 ft. deep, 200 ft. wide, and 1200 ft. long, giving altogether 88,888 cubic yards of itself. This dirt, so far as worked in the claim below, has averaged $4 a carload. A cubic foot of clay and rock weighs 160 lbs., and as the gravel in question is about the same in weight, we take that as the basis of our calculations. A common carload of gravel is supposed to weigh 1 ton, although we think that an over-estimate on an average, and a cubic yard of this gravel, taken like clay and rock at 160 lbs., will weigh 4320 lbs.—hence to get at the total yield of 88,888 cubic yards at $4 per ton we must either double the total amount of cubic yards or the average pay of $4 a carload or per ton. In that case we claim the money to be taken out of the blue gravel amounts to 87 1,104, which added to the $250,000 still to be washed from the upper strata, makes the total future productiveness of the mine $961 104. Our own opinion is this is a reasonable estimate, and as it is presented as a matter purely of public interest, we have used every precaution to make it correctly. We have only to add the principal object of the present season's operations is to clean off sufficient bedrock to obtain room for the erection of a first-class crushing-mill, and then the claim will be perfect in every respect. We beg to acknowledge the attention and civility of Mr. Stone, who has been at the head of the mine for several years. He appears to have the caution, prudence, and enterprise necessary in a good superintendent, and so far as the mine appears to day its condition reflects great credit on his management.—*Dutch Flat Forum*, March 7.

COLORADO UNITED.—In a circular to the shareholders the secretary writes (March 26) that, although the financial position of the company is not all that could be wished, yet the arrangements now made have obviated the necessity for an appeal to the shareholders, and the general prospects of the company are very encouraging. Acting under the special authority and instructions of the board the company's trustees and Mr. Andrews, as attorney for the company, have executed a mortgage of the company's property, under which the sum of $25,000 in the company's obligations, bearing interest at the rate of 12 per cent. per annum, have been issued. The other liabilities of the company do not exceed $25,000; these are of a current nature, and with economy and care will, it is expected, be rapidly reduced and soon extinguished. The operations for January showed an actual profit of $220·91. Augmented by the sum of $1825 25, which belongs properly to capital expenditure, the ordinary mining operations show a profit of $2046 16. Two tunnels are being run to intersect the two belts of lodes owned by the company. The Union tunnel, the lower or Terrible belt; the Silver Ore tunnel, the upper or Brown belt of lodes. The total expenditure on capital account has been $47,875. The heavy expense of running the two tunnels will cease immediately the lodes are cut. On March 25 the secretary received a telegram, "Big strike Union tunnel." This indicates that the Terrible lode has been struck, and that it shows a good body of ore at the heading of the tunnel. The other tunnel is believed to be close to the Brown lode. The accounts of the company will be made up to March 31, and a general meeting called as early as possible, when the shareholders will be asked to confirm the mortgage, as required by the company's Articles of Association. The mining operations and the general superintendence of the affairs of the company are now under the charge of Mr. Cecil C. Morgan, an English gentleman, who has had large mining experience in the Western States of America, and the management generally is in complete accord with the American shareholders, from whom the company continues to receive valuable assistance in carrying on its affairs. The reserves of ore in sight on Jan. 31 last are estimated to yield a net profit of $75,000. The new dressing-works will be in operation early in the spring, and there is low-grade ore on the dump, and broken in the mine, sufficient to employ them for a twelvemonth. The accounts for February, just to hand, show a profit of $9057·47.

BLUE TENT.—The reports and accounts to be presented at the meeting, on Tuesday, show that the company has received on capital account, debenture account, in bills payable, and from sundry creditors, 199,650*l.* 15s. 9d., of which 2967*l.* 11s. 3d. remains unexpended. The company's assets are (in addition to 1966 unissued shares), sundry debtors, 1498*l.* 15s. 1d.; and cash, 2967*l.* 11s. 3d.: together, 4466*l.* 6s. 4d., whilst the liabilities are (exclu-ive of the 35,000*l.* debenture debt), bills payable, 4050*l.*; sundry creditors, 20,430*l.* 15s. 9d.: together, 24,480*l.* 15s. 9d. The directors in submitting their annual report and that of Mr. T. Price, their general manager, congratulate the shareholders on the large increase in the amount of gold produced by the mines—the total gold yield for 1875-76 being $33,716 67, while for 1876-77 it reached the sum of $104,110·73. The drought in California, the want of storage reservoirs, and the consequent short supply of water, compelled the working of the mines to be stopped at the end of last August, and it was not resumed until the middle of January, so that during the fourteen months embraced in the report the total working time (in which the above amount of gold was produced) did not exceed six months. The rains this season, though late, have been copious, and a good supply of water for the spring and summer months is ensured, by reason of the abundance of snow in the Sierra Nevada Mountains. The directors anticipate a valuable addition to the summer water supply of the company when the Fall Creek Lakes Water Company have completed the improvements in their ditches and lakes this summer. The indebtedness of the company has increased, owing to the want of water to work the mines during a considerable portion of last year, as mentioned above, and to constructional and other outlays, without which the mines would not be in the condition they now are to increase the output of gold and to show the profitable returns which the directors confidently expect this season will give, judging from the cleans-up reported since Feb. 11, amounting to $12,218. Mr. Price gives details of operations. Enterprise shows a loss of $2802; South Yuba shows a profit of $37,966; Blue Lead a profit of $703—but there has here been an expenditure on capital account not charged of $11,926. On Blue Tent ditch $11,007 has been expended; and on reservoir and Mount Vernon $3688.

RICH SILVER ORE.—The silver wealth of Arizona is something marvellous. Its mountains are ribbed with metallic veins, carrying a high percentage of native silver. The Stonewall Jackson Mine, owned by McMillan and Co., is turning out remarkably rich ore. About a ton of it has just been received at the metallurgical works of Prof. Thomas Price, which, it is estimated, will yield in the neighbourhood of $20,000. A short time ago a ton of rock from the Stonewall Jackson Mine was reduced at the same establishment and yielded $15,000 in silver. The ore is honeycombed with the precious metal, which, when separated from the rock, remains in strings and lumps of various sizes and shapes. In its primitive condition the metal assumes many curious and beautiful shapes, mostly of a vegetable character. Some specimens strikingly resemble ferns and other small and delicate plants.—*San Francisco Post*, March 13.

Meetings of Public Companies.

BAGWORTH COLLIERY COMPANY.

The seventh ordinary general meeting of shareholders was held at the Cannon-street Hotel, on Thursday,

Mr. GEORGE H. JAY in the chair.

Mr. JOHN WRIGHT (the secretary) read the notice calling the meeting; the report of the directors was taken as read.

The CHAIRMAN said the directors had not adhered to the promise of calling the meeting earlier in consequence of some difficulty with the accounts, but he would pledge his word that the accounts, as now rendered, were a true statement of the company's affairs. They had taken the greatest possible care to investigate the value of the debts upon the books, but of course the machinery stood as it was paid for. Nothing could be more unsatisfactory to the directors than to have to appear before the shareholders with a balance-sheet upon which they could declare no dividend, but he thought the directors might take credit for having tried hard to obtain a dividend, but they had been beaten by the times. It was not the fault of the directors that they were not able to declare a dividend. It must be patent to everybody that not only collieries but almost every description of business had suffered loss, and this was the same miserable sort of requiem sung by all directors. The balance-sheet ought not to cause too much dejection at first sight. They had been increasing the output very largely, thus showing that they had the material there, and if they had a better market price the colliery would pay. They were not governed by their own prices, but the prices were fixed by a local association. The directors had tried to ascertain why they could not get a better price, and the main reason was that a coal had come into the Leicester district from Derbyshire which was superior to Bagworth coal, and realised more money, and this Derbyshire coal had done them injury in the way of competition. With the view of seeing what was best to be done for the company, at a later period of the proceedings the directors would propose that a small committee of shareholders be appointed to consult with the board. In conclusion, the Chairman moved the adoption of the report and accounts.

Mr. J. T. PAGAN seconded the resolution, and said that every endeavour had been made to cut down the expenses, and the directors had reduced their own remuneration from 500*l.* to 300*l.* a year. The balance of loss sustained to Sept. 30 was 615*l.*, and to December 30 it was 57*l.*, which was a material reduction. The Bagworth coal would not pay to stock, because it crumbled away. The recent advance upon the Coal Exchange in London did not seem to have penetrated to the country, and he could not tell what would be the loss till June next. They must remember that a good part of the time would be summer weather. They had a workable balance of actual cash of between 2000*l.* and 3000*l.*, and no debt of which the directors were aware. He was prepared to stand by the colliery as long as the shareholders were, but he begged they would take a business view of the situation, and carefully consider what was best to be done in the interests of the company.

Mr. COATES, sen., asked what had been the actual loss per ton?—The CHAIRMAN: The loss was 5d. per ton during the last two or three weeks.

Mr. COATES, jun., said they were positively giving away their coal as well as losing money, and he asked whether it would not be better to stop work altogether, and pay merely the standing charges?

Mr. BUCKINGHAM said that if they were to stop the cost per annum would still be about 2000*l.* a year, including dead rent of 600*l.*

The CHAIRMAN, in answer to a remark, said the question of reducing the wages had occupied a great deal of the attention of the board. A neighbouring colliery was now on strike in consequence of a movement of that kind. It remained to be seen whether in the Bagworth Colliery, rather than see the affair stop, the men would accept such wages as would enable the directors to carry on the colliery—not, perhaps, at a profit, but still not a loss.

Mr BUCKINGHAM said the shareholders were deeply indebted to the directors for the great pains they had taken to make the company pay. He did not believe the directors could save another penny of expenses. Although he would not for ten times the amount the directors were receiving occupy a seat at the board, yet he would do everything in his power to assist the company in pulling through. In some other collieries the men had come in at a reduction of wages, and if this company had had 12 per cent. reduction of wages they would have been able to show a small profit. He was prepared to go with the directors to the mine, and let the men see the printed balance-sheet, showing a loss, and ask them whether it was not better to share in the loss, and submit to a reduction of 12 or 15 per cent. in wages, so as to enable the colliery to be carried on without any loss at all, rather than compel the directors to shut up the colliery. an i he was sure that when good times came again the shareholders would be only too happy to increase the wages. (Hear, hear.) He hoped the workmen would see it was to their interest to yield to the reduction, but if they refused to give up any portion of their wages, then it would become a serious question whether it was not better to stop the colliery, at a certain loss of 2000*l.*, rather than go on with an uncertain loss of more than 2000*l.*? He felt deeply indebted to the directors for all they had done.

Mr. LAWTON (the manager), in answer to Mr. Pagan, said that at the present moment the men were averaging about 4s. per day, which was a slight reduction compared with what they were receiving some time since. He mentioned incidentally that in the days when Mr. Gleadon had the management the men earned as much as 8*l.* or 9*l.* per week.

Mr. COATES, sen., agreed with the suggestion that there should be a meeting for consultation between the directors and the men.

Mr. LAWTON said it was the intention of himself and the engineer to see the men, and ask them to submit to a reduction of 2d. per ton immediately. The only way to improve the position of the company was by increased output and increased sales. The latter was extremely difficult, owing to the great competition, but he suggested that it would be to the advantage of the company to have a traveller regularly attending the markets with a view of pushing the sale of the coal.

Mr. PAGAN said this was a point which had already been considered by the directors. What the company wanted was to get hold of the large consumers, and they were devoting their best attention to the obtaining of that object.

After some further discussion on matters of detail the resolution for the adoption of the report and accounts was put and carried.

The CHAIRMAN then moved that Mr. Coates, Major Gordon, Mr. Buckingham, and Mr. Gleadon, be appointed a committee to confer with the directors, and to determine what is best to be done in the interests of the company.

The resolution was seconded and carried.

Mr. GLEADON said that if the directors met the workmen they must take a very decided stand. He thought an attempt should be made to extend the hours of labour.—The resolution was put and carried.

Lord W. B. Phipps was then re-elected a director, and Mr. James Johnson was re-appointed auditor.

On the motion of Major GORDON, seconded by Mr. COATES, a vote of thanks was passed to the Chairman and directors, and the meeting separated.

[For remainder of Meetings, see to-day's Supplement.]

THE COAL TRADE.

Mr. J. R. Scott, the Registrar of the London Coal Market, has published the following statistics of imports and exports of coals into the port and district of London by sea, railway, and canal during March 1878:—

By sea.	Ships.	Tons.	By Railway and Canal.	Tons	c.
Newcastle	139	117,932	London & North-Western.	163,879	2
Seaham	30	14,143	Great Northern	76,912	0
Sunderland	101	73,180	Great Western	72,214	0
Middlesborough	5	1,530	Midland	135,816	0
Hartlepool	112	24,915	Great Eastern	49,375	4
Scotch	6	2,564	South-Western	3,817	15
Welsh	8	1,811	South-Eastern	1,823	9
Yorkshire	19	776	Grand Junction Canal	237	0
Small coal	10	2,300			
Cinders	5	398			
Colonial	1	130			
Total	436	249.674	Total	443,273	10
Imports—Mar., 1877	442	258,543	Imports during Mar., 1877	403,477	15

Comparative Statement, 1877 *and* 1878.

By Sea.	Ships.	Tons.	By Railway and Canal.	Tons.	c.
Jan. 1 to Mar. 31, 1877	1519	905,143	Jan. 1 to Mar. 31, 1878	1,416,985	0
Jan. 1 to Mar. 31, 1878	1411	882,192	Jan. 1 to Mar. 31, 1877	1,229,848	0
Decrease—1878	108	22,951	Increase—1878	187,137	0

EXPORTS.

Railway-borne coal passing *in transitu* through district	Tons	71,495
Sea-borne coal exported to British possessions, or to foreign parts, or to the coast	Tons 51,566	
Ditto, sent beyond limits by railway	11,335	
Ditto, by canal and inland navigation	2,224	= 65,125
Railway-borne coal exported to British possessions, or to foreign parts, or the coast	40,928	
Ditto, by rail beyond district	24	
Ditto, by canal and inland navigation	335	= 41,287
Sea-borne coal brought into port and exported in same ships		1,265
Total quantity of coal conveyed beyond limits of coal duty district during March, 1878		179,172
Ditto, March, 1877		117,427

Comparative Statement, 1877 *and* 1878.

Total distribution of coal from Jan. 1 to Mar. 31, 1878	558,859
Ditto, Jan. 1 to Mar. 31, 1877	469,823
Increase in the present year	89,036

General Statement.

Increase in coals imported by railway and canal, present year	187,137	
Less decrease by sea	22,951	= 164,186
Deduct increase in coals exported		89,036
Total increase in trade within London district during present year		75,150

THE COPPER TRADE.

Stocks in Europe:—	Tons.	
Chili ores and regulus, Liverpool & Swansea (equal to fine)	3,658	
Chili bars in Liverpool	12,472	
Ditto Swansea	1,805	
Chili ingots in Liverpool	—	
Ditto Swansea	—	
Foreign copper (chiefly Australian) in London	5,563	
Ditto ditto landing	168	
English copper in London	50	
Chili bars and ingots and Barilla in Havre	9,781	
Other copper in Havre	350	= 33,847
Afloat and chartered from Chili to Europe (advised by mail):—		
Ores and regulus (equal to fine)	2,491	
Bars and ingots	5,124	= 7,615
Afloat from Australia (advised by mail):—		
Fine copper		1,800
Afloat and chartered from Chili to Europe (advised by cable):—		
Fine copper		4,100
Total		Tons 47,362

Leadenhall-street, April 1. —— HENRY R. MERTON AND CO.

Stocks have again increased in the month, and prices further receded. Spot stocks are 1100 tons greater than on March 1, and including the Chili afloat about 9000 tons larger. Bars are 30s. to 40s. cheaper, English raw copper, 60s., and manufactured about the same, while in Australian sorts there has been quite a collapse. The importations of copper for the first two months of the year show a slight falling off, while the exports have increased over 2000 tons in the same period as compared with 1877. A very considerable quantity of Tharsis copper (which does not figure in the imports) is comprised in the export totals, hence stocks are not influenced in the present returns. While the existing state of trade remains unaltered, and the imports of copper go on increasing, we can look for no improvement in price. Consumers are more loath than ever to purchase excepting in trifling quantities to supply pressing wants. The French and other continental markets are as much depressed as the London, and the East has been so swamped with both copper and yellow metal consequent upon the low prices ruling here towards the close of November last, that it is vain to expect any but a trifling demand from thence. There is somewhat more evenness now between the quotations for Chili and English raw copper than ruled previously to March, but there is room for a further fall in the prices of bar copper, and should war unfortunately break out, all description must be lower.

We subjoin our usual monthly statistics:—The imports of copper into England for the first two months of the following years were, 1874, 13,267 tons; 1875, 13,944 tons; 1876, 13,102 tons; 1877, 13,135 tons; 1878, 12,045 tons. The exports for the same periods were, 1874, 7977 tons; 1875, 7256 tons; 18 6, 7451 tons; 1877, 8233 tons; 1878, 10,456 tons. The position from April 1, 1877, to April 1, 1878, was as follows:—

	Price.	Stock on hand.	Stock, including afloat and chartered. Advised by mail only.
1877—April 1	£ 71 0 0	Tons 28,563	Tons 36,833
May 1	69 0 0	29,585	35,968
June 1	69 0 0	29,342	34,844
July 1	69 0 0	29,523	35,578
August 1	69 0 0	29,893	34,513
September 1	67 0 0	31,004	35,437
October 1	66 0 0	31,823	36,239
November 1	65 10 0	31,454	38,177
December 1	63 10 0	30,701	36,861
1878—January 1	66 0 0	31,388	38,713
February 1	66 0 0	31,305	37,769
March 1	66 0 0	33,235	40,535
April 1	63 10 0	34,345	41,460

And the comparative positions at the same date of the past four years with the present:—

	Price.	Stock.	Stock, including afloat and chartered. Advised by mail only.
1874—April 1	£ 75 0 0	Tons 29,500	Tons 36,908
1875—April 1	80 0 0	23,365	32,758
1876—April 1	77 0 0	20,734	30,982
1877—April 1	71 0 0	28,563	36,833
1878—April 1	63 10 0	34,345	41,460

The charters to March 31, 1878, were 12,500 tons, against 11,400 tons; to March 31, 1877.

Leadenhall-street, London, April 5. —— HENRY ROGERS, SONS, AND CO.

COPPER.—Messrs. RICHARDSON and Co. (April 1) write that the stocks of foreign copper produce remaining at Swansea unsold this day are—Chilian 2189 tons copper ore, 6040 tons regulus, 1805 tons copper; Cape, 600 tons copper ore; Italian, 701 tons copper ore; Dutch, 206 tons copper ore; Portuguese 114 tons copper ore; Australian 125 tons copper ore; Newfoundland—Betts Cove, 1538 tons copper ore—total, 5503 tons copper ore, 6040 tons regulus, 1805 tons copper. These totals represent about 5770 tons fine copper. There has been no private sale of Chile furnace material reported during the past month, but about 320 tons of Moonta have been sold at 12s. 4½d. per unit. The charters advised during the past month are—For the last half of February 1800 tons bars and ingots for England, 300 bars for France; for the first half of March 1650 tons bars and ingots, 150 tons in ore and regulus for England, and 200 tons bars for France. The price of bars at Valparaiso being equal to 64*l.* 7s 6d. laid down at Liverpool.

The value of Chili bar shows a fall of about 2*l.* since our last monthly circular, g.o.b.'s being now quoted 63*l.* Australian was neglected, and the shipping demand for English manufactured has become very slack. Charters from the West Coast for first half of March were advised as 2000 tons; second ditto, 1900 tons. We quote Chili bars 63*l.* to 64*l.*, Wallaroo 74*l.*, Burra, 71*l.* 10s., tough, 68*l.* 10s., best selected 70*l.*, manufactured 74*l.* to 75*l.* The imports and exports for January and February were, by the Board of Trade returns—

	1878.	1877.	1876.
IMPORTS.			
Ore Tons	13,837	10,078	11,464
Regulus	4,016	4,739	6,613
Copper	5,384	6,465	6,905
EXPORTS.			
Foreign raw	2,807	2,874	2,616
English raw	3,847	1,716	1,566
Manufactured, including yellow metal and brass	4,127	4,184	3,529

London, April 4. —— FRENCH AND SMITH.

Arrivals here (Liverpool) during the fortnight of West Coast (S.A.) produce:—Galicia, from Valparaiso, 330 tons bars, 60 tons ingots; Potosi, from Valparaiso, 650 tons bars, 100 tons ingots.—At Swansea: Huasco, from Carrizal, 635 tons regulus; Lord Marmion, from Carrizal, 725 tons regulus. Stocks of copper (Chilian and Bolivian) in first and second hands, likely to be available, we estimate at—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	445	917	12,472	—	—
Swansea	2189	6040	1,805	—	—
Total	2634	6957	14,277	—	—

Representing about 17,935 tons fine copper, against 17,503 tons March 15; 13,847 tons March 31, 1877; 10,436 tons March 31, 1876; 13,091 tons March 31, 1875. Stock of Chili copper in Havre, 8860 tons fine, against 10,665 tons March 31, 1877; stock of Chili copper afloat and chartered for to date, 11,000 tons fine, against

7,600 tons March 31, 1877; stock of foreign copper in London, chiefly Australian, 2,000 tons fine, against 3594 tons March 31, 1877.

HARRINGTON, HORAN, AND CO.

THE TIN TRADE.

	Feb. 28, 1878.	March 31, 1878.	March 31, 1877.	March 31, 1876.
Straits and Australian, spot...Tons	7,060	8,518	8,300	6,400
Ditto, landing	986	351	635	325
Straits afloat	880	635	547	860
Australian, afloat	2,300	2,385	2,500	2,159
Banca, on warrants	1,134	1,571	1,470	853
Ditto, Trading Co.'s hands	438	204	393	1,747
Ditto, afloat	263	350	526	506
Billiton, spot	1,452	1,647	1,029	912
Ditto, afloat	1,400	1,100	1,100	1,000
Australian tin in Holland	478	432	700	—
Total ...Tons	16,991	17,193	17,260	14,762
Deliveries during the month in				
London	1,060	1,019	756	1,194
Ditto, Holland	533	458	514	380
Total ...Tons	1,593	1,477*	1,270	1,574
Prices of Straits	£63 15	£63 10	£70 10	£73 0

Shipments from Straits, in March ...Tons 425
Ditto, Australia, ditto ... 810

	During 12 months ending Mar. 28, '78.	During 3 months, '78.	During 3 months, '77.
Shipments from Straits to London...Tons	2,991	1,410	1,329
Shipments from Australia to London	9,372	2,025	2,171
Deliveries of foreign tin in London	11,228	3,223	2,278

* Also 170 tons overside to America.

A. STRAUSS AND CO.

London, April 1.

Our tin market was decidedly firmer in the beginning of the month, the signature of the Treaty of Peace between Russia and Turkey giving promise of a gradual revival of trade. Prices advanced fully ½ fl., and sellers came out very reluctantly. Confidence, however, has since again been shaken by the less reassuring aspect of politics, and with a very slow demand, prices are about ½ fl. below those current at the end of last month, the market closing with a downward tendency. The Dutch Trading Company's second sale in 1878 took place yesterday, when 20,972 slabs Banca were sold from 39¾ fl. to 40¼ fl., average 40 fl. Banca has been very firmly held, the price at one time advancing to 41 fl., and even 41¼ fl. was paid for immediate delivery. The price subsequently declined to 40½ fl., the arrival of the steamer Prins Hennrik with 11,000 slabs promising the usual supply for the sale on the 29th inst. Notwithstanding the fact that several thousands of tons are lying idle at Banca and Batavia, no proper measures are taken to make sales of about 21,000 slabs a certainty. This quantity being necessary to meet the requirements of the trade, we would suggest to have a sufficient stock in readiness in Holland, and trust that such may henceforth be the case. Since the sale there are buyers at 39½ fl. Billiton has been in continued good demand. The price advanced from 38½ fl. to 39 fl. with a considerable business at the latter figure. The advance has since been lost, and even 38¾ fl. was accepted for several parcels landing. There are now buyers at 38 fl. On Monday the 8th inst. a public sale comprising about 10,000 peculs Billiton will take place at Batavia.

The position of Banca tin in Holland on March 28, according to the official returns of the Dutch Trading Company, was—

	1878.	1877.	1876.
Import in March ...Slabs	12,517	2,111	2,902
Total three months	17,550	34,191	11,024
Deliveries in March	7,000	10,040	5,916
Total three months	26,323	30,371	20,157
Stock second hand	50,272	47,018	27,300
Unsold stock	6,519	12,673	55,460
Total stock	56,791	59,691	82,760
Afloat ...Peculs	5,600	8,425	8,100
Statement of Billiton:—			
Import in March ...Slabs	12,616	3,100	2,800
Total three months	32,345	21,547	22,879
Deliveries in March	7,976	5,927	8,6 2
Total three months	18,148	22,652	23,410
Stock	52,707	29,514	28,948
Afloat ...Peculs	9,000	13,000	14 000
Quotation } Banca	40 fl.	42¼ fl.	49½ fl.
March '30 } Billiton	38	41½	46

These combined returns of Banca and Billiton for 1878, compared with those for 1877, exhibit—An increase of the import for March of 623 tons; a decrease of the import for the three months of 245 tons; a decrease of the deliveries for March of 31 tons; a decrease of the deliveries for the three months of 267 tons; an increase of the stock second hand of 826 tons; a decrease of the unsold stock of 192 tons; an increase of the total stock of 634 tons; a decline of the quotation of Banca of 4*l.* 3s. per ton. The Government Returns for the month of December and January are as follows:—

EXPORT OF TIN FROM HOLLAND.

	December. 1877.	1876.	1875.	January. 1878.	1877.	1876.
Germany ...Tons	346	272	355	210	237	171
England	22	2	17	—	19	7
Belgium	146	168	114	119	192	79
France	31	56	22	15	53	10
Hamburg	68	53	36	46	25	23
United States	—	—	9	—	27	2
Other countries	73	16	—	5	4	3
Total	686	565	553	386	557	295

Rotterdam, March 30. EBELING AND HAVELAAR.

Values remained very steady during the past month, with a good consumptive demand, but during the past few days a decline of about 1*l.* per ton has been established. This is attributable rather to the desire on the part of a few to quit an unprofitable operation than to any unfavourable feature in statistics. Total visible supplies are now about the same as a year ago, when the price of Straits was quoted 71*l.* per ton. During the first three months of this year we have consumed about 600 tons more foreign tin than during same period 1877, while the actual quantity brought to market shows an increase of about 100 tons. Shipments from Australia are wired as 800 tons, and from the Straits 460 tons. Deliveries from London were 1010 tons, and from Holland 468 tons. The Dutch Trading Company's second sale in 1878 took place on the 29th ult., when 20,972 slabs Banca were sold from 39¾ fl. to 40¼ fl., average 40¼ fl.—about 68*l.* here. We quote Straits and Australian, 63*l.*; English ingots, 67*l.* 10s.; Banca, 40 fl.; Billiton, 38 fl. Below we give our usual statistics:—

	1878. March 1.	1878. April 1.	1877. April 1.	1876. April 1.
Foreign in London ...Tons	8,638	8,870	8,990	6,725
Banca in Holland	1,134	1,571	1,469	853
Billiton in Holland	1,446	1,647	929	905
Afloat for Europe, Straits, advised by mail and wire	750	670*	500	875
Afloat, Australian ditto	2,100	2,300	2,100	2,000
Afloat, Billiton	900	562	812	875
Banca in Dutch Trading Co.'s hands	470	204	396	1,733
Banca afloat, by sailing vessels	260	350	526	500
Total	15,698	16,074	15,715	14,466

* This figure includes 110 tons per Ulva to Marseilles.

April 4. FRENCH AND SMITH.

WEST SETON.—It is gratifying to learn that there is no falling off in the sales of copper ore in this mine, for there is again for sale this week 224 tons of copper ore, which is expected to realise quite 1000*l.*; and with about 25 tons of tin every four weeks the adventurers ought to reckon upon declaring a dividend this year even at the present wretched low price of metal, but should an advance take place a dividend might be fairly calculated on at the meeting after next, the next meeting being in three weeks. Rumours are afloat, according to the West Briton of last week, that a dividend will be declared at that meeting, but it is hoped by many of the shareholders that such an insane act will not be attempted at present. The continued improvement at the 140 fm. level, going west, where the agents are so sanguine of rich bunches of copper ore, gives much encouragement and satisfaction not only to the shareholders but to the inhabitants of Camborne generally; and it is, no doubt, in the recollection of many of the readers of the Journal that the late agent, Capt. Josiah Thomas, always recommended a vigorous working of the western part of the mine, where he says the adventurers may expect great discoveries of copper ore. West Seton bids fair to be soon in the Dividend List again in spite of the depression in the metal trade, and the recent differences relative to the best and most economical course of working the mine.

EAST CARADON.—A tributer of very considerable experience, who has recently worked in this mine, informs an adventurer he is sure that in sinking a few fathoms deeper they will meet with rich deposits of copper ore. Having regard to the close proximity of its rich neighbour, South Caradon, and Capt. Holman's report some time back, it is very probable that East Caradon will turn up a prize, and we do not know in such a rich locality how soon that event may happen. It is, undoubtedly, a sensational mine, and an improvement would soon cause a great stir. There are certainly two good underground agents here, but a question arises, will it be prudent of the shareholders at their next meeting to reduce the salaries of the present staff until better times, or at any rate dispense with one or more of the number? There is a secretary, a clerk and bookkeeper, or country purser, and two underground agents, besides others who are receiving the same pay, I presume, as when the shares were 50*l.* or 60*l.* each, and large sales of ore were taking place. It is hoped that the shareholders will take this matter into their serious consideration at the next meeting. Economy is the order of the day now—I do not mean false economy, but a judicious expenditure in these times. There are fine stones of copper ore now being produced from the south part of Child's lode, in the 130 west, and fair progress is made in driving the cross-cut north from the winze, where the ground is favourable for driving, and branches of copper ore are expected to be met with. The rapid sinking of Williams's shaft is of the utmost importance. It is to be regretted that the agents do not send a report at least once a fortnight to the Journal, for we find that agents in several of the best mines in the county, such as South Condurrow, Wheal Uny, and a number of others do so, and why do not East Caradon agents?

NEW TYLLWYD MINE.

Since Mr. Forrest has been reappointed secretary he has applied himself to the task of raising fresh capital to carry on this mine, and it is gratifying to learn that so far he has met with every encouragement. In the adit level of the south-west lode some rich ore was obtained by the old company. The engine-shaft has been sunk 30 fathoms, and a cross-cut extended from it at 20 fathoms below the adit, driving a level right under the ore-bearing part of this lode. A winze has been sunk through the ore for the purpose of communicating with the 20, directly underneath. It has been sunk about 12 fathoms, and bears good ore nearly all the way. Mr. Walter Eddy reports that the ore in the present bottom is workable at a profit, but cannot be taken away economically on account of the water.

There is an offer from the miners to complete the winze to the 20 fm. level for 70*l.*, which would unwater this part of the mine, and lay open ore ground for stoping; they say they would then contract to raise ore from here at the rate of 8*l.* per ton. This would leave a very good profit for the shareholders. The engine-shaft being down 30 fathoms, no further expense on that account would be required, but a very few fathoms driving from the bottom of the shaft would cut this same south-west lode at the ore-bearing part at a 30 fm. level, and Mr. Eddy reports "this fine lode, which is nearly all improved in virgin ground from the 30 fm. level to adit, will then be laid open," and he adds "certainly a better trial or a more promising speculation than the full development of this fine lode in length and breadth I do not know." He concludes his report by saying "the machinery for winding and pumping is in good order, and no other expense is wanted for the opening out this lode at the 20 and 30 than manual labour." He considers that if 500*l.* or 1000*l.* could be subscribed the expenditure thereof would have a good prospect of opening up such a mine as would recoup the shareholders for all the money that had been expended on it.

Mr. Forrest's suggestion is as follows:—The capital of the company being 17,000 shares of 1*l.* each, whereof 7376 have been allotted, leaving 9624 unallotted. He proposes to offer the whole of these 9624 shares to the subscribers of 1000*l.*; that would be at the rate of 2s. per share. He frankly tells the shareholders that he does not wish them to consider there is no risk in subscribing, and points out there is such a risk as attends all mining operations; but he says he has used all precautions in getting advice from competent persons. Everyone knows he could not get a professional man of greater experience and caution than Mr. Walter Eddy, who reports that he does not know of a more promising speculation. The miners are ready to complete the winze laying open the ore for 70*l.*, and after this is done they say they will raise ore for 8*l.* a ton. From the moderation with which this appeal for further capital is stated, the good opinion quoted above of Mr. Eddy, and the calculations of what the miners will contract for, we feel satisfied the shareholders will make a united effort to raise the small amount required, and thus save their mine, while they at the same time support those who have relieved the mine from its mortgage debt of 1200*l.*

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

During the past week the unsettled state of politics has caused business to be almost entirely suspended. The dispatch issued by the new Foreign Secretary is viewed as being of so decided a nature that Russia will be unable to continue her shuffling policy any longer, and the result is awaited with great anxiety. It is cheering in such a state of affairs to refer to the Revenue Returns of the United Kingdom, issued on Monday, showing the very satisfactory increase of fully half a million over the estimated balance. When evidence such as this is taken into account in connection with the low prices of all mineral securities, it is difficult to see how there is room for anything but a rise in prices, though of course the element of time has to be kept in view.

Shares of iron and coal concerns show no noteworthy alteration. Bolckow Vaughan, and Charles Cannel and Co., are now dealt in ex div. Chapel House shares firmer, but the 7½ per cent. Debentures are unaltered. Richards and Co. have declared the usual interim dividend at the rate of 10 per cent. per annum for the half-year ending March 31. Andrew Knowles and Sons are at 62s. 6d. dis. Antrim, A, 45s.; ditto, B, 40s. Bolckow Vaughan, A, 5; ditto (100*l.* paid), 111; ditto, B, 84¾. Bowling, 72¼. Brown, Bayley, and Dixon, 10 dis. Cardiff and Swansea, 15s. to 20s. Carnforth, 115½. Charles Cannel and Co., 8¼ dis. Chillington, 60s. to 70s. Consett, 16⅞. Ebbw Vale, 7½ to 8. Henry Briggs, A, 11¼; ditto, B, 7½. New Sharlston (Pref.), 72s. 6d. Rhymney (new), 5¼. Scottish Australian, 32s. 6d. to 37s. 6d. Thorp's Gawber Hall, 55s. Ulverston, 8. West Cumberland, 7 to 8. West Mostyn (Pref.), 25s. Workington, 15.

In shares of foreign copper concerns, Tharsis have advanced 8s. 9d. per share on the 10*l.* paid shares, and 5s. on the new ones, the dividend announced last week being considered very satisfactory in the present state of trade, and it is probable the annual report, to be issued soon, will be a favourable document. Cape shares are now dealt in ex div. The West Prussian Company have declared the usual quarterly dividend on the Preference shares at the rate of 8 per cent. per annum, but in view of the continued decline in the market value of mineral produce, and the uncertainty of commercial prospects, the usual interim dividend on the A shares is not to be paid, although sufficient profits have been earned to do so. Fortuna are at 5½. Hornachos, 13 to 14. Hultafall, 75s. to 80s. Kapunda, 1s. 3d. New Quebrada, 32s. 6d. Rio Tinto Five per Cent., 55¾. Yorke Peninsula, 5s.

Shares of home mines neglected. A three-monthly general meeting of the Combmartin is to held on the 10th inst. to pass the accounts and to make a call; a half-yearly meeting of the General Mining Association on the 16th inst. to declare a dividend, &c. Leadhills are dull, as investors seem disposed to wait to ascertain before acting what the dividend is to be, or, indeed, if there is to be any. There are probably, few shares at present prices with so good a chance for a rise as those of the Rhosesmor Mine at 30s. to 35s., for it must be kept in view the mine paid large dividends, and had good prospects before it was flooded; and when it is drained, and the level for the purpose is now being driven at the rate of 50 yards a month, it would not be surprising if the shares were to rise to 20*l.* each in a very short time. Bampfylde are at 4s. Combmartin, 1s. Dolcoath, 32. East Van, 90s. Great Laxey, 19⅞. South Condurrow, 10¾ to 11¼. Tincroft, 12. West Tankerville, 11s. to 13s. West Tolgus, 70½.

In shares of gold and silver mines Richmond are 2s 6d. lower; the week's run is again $100,000. It is stated that Hunter Consols have now got a large quantity of high-grade ore on hand, and will begin running the furnaces again very shortly. The Tolima advices for January are favourable, a profit of 181*l.* having been made, while the agent reports that the mine is looking well in depth, and that he anticipates a steady improvement. The produce of St. John del Rey for the second division of March is 14,000 ozs.—5425*l.* The Javali Company's report for 1877 shows that a loss of 76*l.* has accrued on the year's operations, which, however, is more than balanced by the ore in course of treatment. The expenditure on capital account has been charged to revenue, so that the low state of the company's profit is, to some extent, due to its financial difficulties. Almaden and Tiritoar at 10s. Cedar Creek, 5s. to 7s. 6d. Chicago, 27s. 6d. Eberhardt, 5⅝. Emma, 1s. 6d. Flagstaff, 13s. 9d. Frontino, 30s. Javali, 6s. 6d. Santa Barbarbara, 26s. St. John del Rey, 315. South Aurora, 2s. 6d. to 5s.

Shares of oil companies are very firm. Young's Paraffin have have improved 1s. 3d., and Oakbank are 1s. lower. Runcorn Soap and Alkali are about 7 dis.

Miscellaneous companies' shares are quiet, but rather favourably viewed by investors. The Share Investment Trust have a considerable amount invested in Palmer's Shipbuilding and Iron Company, and it is encouraging to know that the Chairman of the Trust stated at the meeting that he had information from various sources to the effect that Palmer's Company had improved very much; in fact, they are now in a position to pay a dividend, and it is merely a question of policy whether they shall pay one or not. The Val de Travers Asphalte Paving Company have declared a dividend of 4 per cent., and it is noticeable the position of this company is gradually improving, and likely to continue to do so, judging by the present aspect of affairs in connection with street paving. A conditional agreement has been entered into between Val de Travers and the Neuchatel Company likely to be advantageous to both. Lawe's Chemical are higher, at 7¾ to 7⅞; ditto 7 per cent. (pref.) unaltered. Langdale's firm at 9*l.* 5s. to 10*l.*s., and Newcastle, 43s. 9d. Shares of wagon companies are quoted—Lancaster, 75s. Midland, 97½. Wakefield, 22s. 6d. Yorkshire, 13¾.

The following calculations show the rate per cent. yielded on investments at present prices in the shares named, based upon the last average yearly dividends being maintained. In iron and coal companies, Antrim, A, would yield 3⅞; ditto, B, 4¾; Arniston, 7½; Benhar, 8½; Bolckow, Vaughan, A, 5⅝; Cairntable, 11¾; and Muntz's Metal, 6½. In oil companies, Dalmeney would yield 13½; Oakbank, 13¾; ditto (new) 12½; Price's Patent Candle, 7; Uphall, 12¾; and Young's Paraffin, 10. Tharsis old and new shares would either yield about 9 per cent. In miscellaneous companies, Milner's Safe may be mentioned to yield 9; Phosphoguano, 9; Scottish Wagon, 5¼; ditto (new) 5½; and United Limner and Vor Rock Asphalte, 8⅜.

GREAT WHEAL RODD (Limited).—A company has been formed under this title to purchase the leases for 21 years, plant, and working rights of a piece of mineral ground in the parish of Northill, near Liskeard, Cornwall, on terms much more favourable than usually obtained. To the north, and in the same strata of ground, are the well known and celebrated Wheal Mary Ann and Trelawny Mines, which in 34 years yielded 919,769*l.* The sett is very extensive, being about ½ mile on the supposed course of the lodes. A shaft has been sunk to a depth of 12 fms. on the course of the north and south lode, which is very promising, and it is expected other lodes will be discovered. The mine is about 2 miles from the Caradon and Looe Mineral Railway, and also has the advantage of a large stream of water for ore dressing, &c. The capital is to be 12,000*l.*, in shares of 2*l.* each, but it is not expected that more than 1*l.* share will be required to be called up.

THE CHILLINGTON IRON COMPANY (Limited).—At the sixth annual meeting of this company, to be held at Wolverhampton, the directors have to report a loss of 9704*l.* on the working for 1877 They state the hopes entertained of an improvement in trade at the early part of 1877 have not been realised, but the depression has increased in all branches of industry in every country. At present, from the great curtailment of production and the termination of the war in the East, the prospects may be considered more encouraging. The selling price of their iron during 1877 has averaged 18s. 7d. per ton less than in 1876. The board lay before the shareholders a communication they have received suggesting a reduction in the nominal capital. The balance-sheet shows that the sum of 2671*l.* has been expended in erections and laying down plant for the making of edge tools, to which the directors have turned their attention.

J. GRANT MACLEAN, Stock and Share Broker.

Post Office Buildings, Stirling, April 5.

VAN MINES—MONTHLY REPORT.

April 3.—As under, please find my monthly report and setting list: Seaham's shaft is sunk below the 105 14 fms. 1 ft.: the lode continues of the same character here as when last reported. The 105, west of shaft, is improving; the lode in the present end is worth 3 tons per cubic fathom for lead ore. Set to six men at 220s. per fathom. A cross-cut to prove the value of the lode out of the 35 fm. rise in the back of this level is set to six men at 200s. per fathom. We have resumed the driving of the 105 by the side of the lode; set to four men at 80s. per fathom. The 90, west of shaft, is driving upon the main leader, which is worth 4 tons of lead ore per cubic fathom; set to six men at 160s. per cubic fathom. The stripping of the lode to the full width in the side of this level at a point about 80 fms. west of shaft is set to eight men at 45s. per fathom. The same, at a point about 10 fms. west of shaft, is set to eight men at 8?s. per cubic fathom. The lode at these two points is worth 1½ ton of lead ore per cubic fathom. The 50 fm. stope in the back of this level is set to six men at 80s. per fathom. The 40 fm. stope is set to six men at 50s. per fathom. The 30 fm. stope is set to eight men at 52s. 6d. per fathom. The 20 fm. stope is set to four men at 60s. per fathom. The 10 fm. stope is set to eight men at 45s. per fathom. The 1? fm. stope east is set to eight men at 47s. 6d. per fathom. The 20 fm. stope east is set to eight men at 47s. 6d. per fathom. The 30 fm. stope east is set to six men at 47s. 6d. per fathom. These stopes are worth on the average 42 cwts. of lead ore per cubic fathom; the average width is 25 ft. 6 in.

The 90, east of shaft, is set to four men, to drive by the side of the lode, at 60s. per fathom; set to six men, to strip down the lode to full width in the side of this level, at a point about 50 fathoms east of shaft, at 70s. per fathom; the lode here is worth 1½ ton of lead ore per cubic fathom. The 75, west of shaft, is set to four men, to drive by the side of the lode, at 65s. per fathom. The 120 winze sinking below this level, is set to six men, at 150s. per fathom. The stopes in the back of this level are set as follow:—The 130 stope, to six men, at 65s. per fathom. The 100, to eight men, at 45s. per fathom. The 90, to eight men, at 60s. per fathom. The 80, to eight men, at 60s. per fathom. The 70, to eight men, at 60s. per fathom. The 60, to eight men, at 60s. per fathom. The 50, to eight men, at 60s. per fathom. The 40, to eight men, at 60s. per fm. The 30, to eight men, at 50s. per fathom. The 25, to six men, at 57s. 6d. per fathom. The 50, to six men, at 65. per fathom. The average produce of the lodes in these stopes is 22 cwts. of lead ore per cubic fathom. Average width, 15 ft. The 75, east of shaft, is set to two men, to drive by the side of the lode, at 60s. per fathom. The 60, west of shaft, is set to four men, to drive at 65s. per fathom. The 60 fm. permanent level to drive west, by four men, at 90s. per fathom. The same to drive east of shaft, at 90s. per fathom.

The 60, east of shaft, is set to two men, to drive by the side of the lode, at 60s. per fathom. The stopes in the back of this level are set as follows:—The 20 east, to six men, at 65s. per fathom. The 8 west, to eight men, at 57s. 6d. per fathom. The 18 west, to eight men, at 60s. per fathom. The 22 west, to eight men, at 60s. per fathom. The 48 west, to six men, at 60s. per fathom. The 54 west, to eight men, at 57s. 6d. per fathom. The 64 west, to eight men, at 57s. 6d. per fathom. The 72 west, to eight men, at 57s. 6d. per fathom. The 90 west, to six men, at 57s. 6d. per fathom. The 100 west, to six men, at 60s. per fathom. The 115 west, to eight men, at 60s. per fathom. These stopes will average in produce 21 cwts. of lead ore per cubic fathom; average width 14 ft. 3 in. The stopes in the back of the 45 are set as follows:—The 90 west, to eight men, at 65s. per fathom. The 40 east, to eight men, at 75s. per fathom. The 54 east, to eight men, at 75s. per fathom. These stopes are on the average 14 ft. wide, and will produce 1 ton of lead ore per cubic fathom.—Surface: We have commenced building the new powder magazine. The machinery is in good working order. Our sale will take place to-morrow upon 400 tons of lead ore and 200 tons of blende.—W. WILLIAMS.

WEST PATELEY BRIDGE LEAD MINES.—The following (quoted from the Pateley Bridge and Nidderdale Herald) refers to the starting of the engine at these mines:—

WORKMEN'S SUPPER AT GREENHOW HILL.—The employees of the West Pateley Bridge Mining Company were gratuitously provided with a substantial supper, on Thursday evening last, at the house of Mr. William Newbould, Moor Cock Inn, Dry Gill, Greenhow Hill. The repast consisted of roast beef, game pies, plum puddings, and other delicacies of the season, presided over by the host and hostess. Captain and Mrs. D. Williams, and the Misses Newbould, who distinguished themselves by the kind and affable manner displayed in ministering to the wants of the guests assembled, consisting of 70 men and boys, who did ample justice to the varied dishes and viands placed before them. After the removal of the cloth a few hours were joyously spent in friendly conversation, diversified with toasts and sentiments, comic and sentimental songs, and recitations. Good humour and kindness were conspicuous through the whole evening until the time for closing arrived, when each departed to his respective home highly delighted with the entertainment. Were such acts of kindness more generally performed they would tend to knit the bonds of affection and sympathy more firmly between the employers and the employed, and would eventually prove a benefit to humanity.

LEAD MINES.—In another column will be found the proceedings of the Roman Gravels Lead Mine meeting of shareholders, which was held this week. We quite endorse the remarks of Mr. Peter Watson when he says it is not only a question of further reductions being made in the cost of working lead mines, but a serious matter for the consideration of directors, managers, and shareholders in mines generally, whether or not it would not be better for all leading lead mines to reduce the output of lead for a time, rather than sell it at present low prices. As Mr. Peter Watson pointed out at the meeting, it should be remembered that early in 1871 lead ore was nearly as low as it is now—11*l.* 10s. per ton, and yet in the short space of two years—May, 1873—the price advanced to 17*l.* 10s. per ton, or equal to about 6*l.* per ton. With the Eastern Question settled, and the building trade in full swing again, we may hope that history will repeat itself. Shareholders in lead mines have reason to hope shortly for better prices for their produce.

GREAT WHEAL RODD.—Capt. Thomas F. Hosking, of the Phœnix United Mines, near Liskeard, has just tendered his resignation, having been appointed manager of the Great Wheal Rodd silver-lead, East Cornwall, The secretary to the mine, we understand, is Mr. W. D. Mann, Carlton House, Torquay, at which place are situated the offices of the company.

HOLLOWAY'S OINTMENT AND PILLS will be found the best friend to persons afflicted with ulcerations, bad legs, sores, abscesses, fistulas, and other painful and complicated complaints. Printed and very plain direct ons for the application of the ointment are wrapped round each pot. Holloway's alterative pills should be taken throughout the progress of the cure, to maintain the blood in a perfect state of purity and to prevent the health of the whole body being jeopardised by the local ailment; bad legs, old age's great grievances, are thus readily cured, without confining the patient to bed, or withdrawing from him the nutritious diet and general support so imperatively demanded when weakening diseases attack advanced years or constitutions evincing premature decreptitude.

COAL MINES REGULATION ACT, 1872.

EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.

DISTRICT UNDER THE CHARGE OF HENRY HALL, ESQ., H.M. INSPECTOR OF MINES.

PERSONS desirous of being EXAMINED in this District for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, should at once COMMUNICATE with the Secretary to the Board of the above-mentioned District at the following address:—19, King street, Wigan.

By order of the Board,
M. W. PEACE, Secretary

N.B.—Persons who do not reside within the District are equally eligible for examination with those who do.

MR. TIMOTHY HUGHES
MINING AGENT AND SHAREDEALER,
59, SEEL STREET, LIVERPOOL.
Reliable information given respecting Welsh and Manx Mines.

PRINCE PATRICK MINE.
New Issue of 12,000 Preference Shares.

T. H. strongly recommends his friends and the public to secure an interest in this very valuable mine while the shares can be obtained under favourable circumstances.

See report in Supplement to *Mining Journal*, March 9th, also advertisement in Journal of March 16th.

MINES OF EVERY DESCRIPTION, AT HOME AND ABROAD, CAREFULLY INSPECTED and VALUED.
Address, MARSHALL and Co., St. Antholin's Chambers, 26, Budge-row, Cannon street, London, E.C.

THE

Lossiemouth Lead Mining Company

(LIMITED).

INCORPORATED UNDER THE COMPANIES ACTS, 1862 AND 1867.

CAPITAL £30,000, IN 6000 SHARES OF £5 EACH,

Of which 5000 are Ordinary, and 1000 B or Deferred Shares, subject to the conditions hereinafter mentioned.

£1 payable on application, £1 on allotment, and £3 in instalments of £1 each, at intervals of not less than three months.

Interest at the rate of 5 per cent. per annum allowed on all sums prepaid.

In the event of no allotment being made the deposits will be returned without deduction.

DIRECTORS.

HENRY P. HARRIS, Esq., 56, Mansell-street, E.C., and Chase House, Hadley.
JAMES HENDREY, Esq., Whitehall Club, Westminster, and The Hollies, Crystal Palace Park, Sydendam.
JAMES L. SHUTER, Esq., Chamberlain's Wharf, Tooley-street, E C., and Lawn House, Holloway
GEORGE TAMPLIN, Esq., 159, Fenchurch-street, E.C., and 12, Manchester-square, W.
JULIAN H. TOLME, Esq., 1, Victoria-street, Westminster, and 17, Dawson-place, Bayswater, W.

GENERAL MANAGER—LESLIE C. HILL, A.Inst.C.E., F.C.S., Civil and Mining Engineer.
BROKERS—JOHN HILL AND SONS, Bartholomew House, Bartholomew-lane, London, E.C.
BANKERS—IMPERIAL BANK, Lothbury, E.C.
SOLICITORS—JAMES BREND BATTEN, 32, Great George-street, Westminster.
FORSYTH AND STEWART, Royal Bank Buildings, Elgin, N.B.
SECRETARY—CHARLES CHAMBERS.

OFFICES,—66, CLEMENT'S HOUSE, CLEMENT'S LANE, LONDON, E.C.

PROSPECTUS.

This company is formed to purchase from Mr. L. C. Hill the lease of the Stotfield Lead Mining Property, situated near Lossiemouth, in the county of Elgin, N.B.,together with all interest in the shaft and other workings, lead ore, plant, &c., now on the property, and to continue to develope and work the lead mines and lodes thereon.

The property is now held on a lease for a period of 19 years from the 14th November, 1875, which lease is to be surrendered, and the proprietor has agreed to grant a new lease to the vendor and others for a term of 21 years from the 14th day of November, 1877, according to the terms of a draft which has been agreed upon.

A copy of this draft lease may be inspected as below, in which it will be seen that full power is granted to work all minerals, and to use the surface for all legitimate mining purposes. subject to the usual conditions, on payment of a royalty of one-sixteenth of all minerals raised and sold, together with a dead rent of £1 per annum. Also that this lease includes the proprietor's rights to all minerals under the Moray Firth below high water mark adjacent to the other minerals.

The lodes run through waste uncultivated lands near the sea shore which are of little value, so that the surface damage will be very small.

Reports have been made on this property by competent mining engineers, from which it will be seen that—

The property is crossed by two powerful, almost vertical lodes, one running north east and south-west, and the other east and west, which intersect each other near the shaft (see plan); the former has been traced ore bearing for a distance of 77 fms. east and 230 fms. west of the shaft.

There is a regular course of ore running along the south wall, which is estimated to be worth 2 to 3 tons of lead per fathom, and also an immense deposit is found, probably caused by the junction of the two lodes; the outcrop of this is exposed at low water, and is seen 100 ft. long and 27 ft. wide, containing good ore throughout, but is stated to be much larger.

Several thousand tons of dressed ore, worth £13 per ton, can be delivered f.o.b. at a cost not exceeding £6 per ton. Also that large returns can be made in six months, and that the mine is capable, when developed, of producing 200 to 300 tons of dressed ore per month, and even more.

Copies of these reports accompany this prospectus, and may also be seen, together with samples of the ore, at the company's offices.

It is confidently expected that, independent of the deposit at the junction, the ground to the south of and above high water mark will yield 150 tons of ore per month; and should this deposit improve and consolidate in depth, as there is every reason to expect will be the case, immense quantities can be raised.

From reasons stated in the reports no difficulty is anticipated from water percolating into the workings, but should this happen the small bay which is crossed by the lodes can be entirely cut off from the sea at a small expense. The shore is constantly forming, and has extended considerably during the last 18 months, so that by building groins and tipping the waste rock into the sea the beach would soon form across the bay.

The proximity of the harbour and railway station affords unusual facilities for transport, and low freights may be obtained to Newcastle-on-Tyne, where the ore can be sold for smelting, as vessels bringing coals from that port return at present in ballast.

Making full allowance for all expenses, including royalty, it is estimated that in permanent working the dressed ore can be delivered f.o.b. at cost not exceeding £7 per ton, and that this will be worth at the present low price (say) £11 per ton.

Even taking the low estimate of 150 tons per month, this will give a profit of £7200 per annum, which would allow of a dividend of at least 20 per cent. on the total capital.

But as the richest deposits are always found at the junction of two lodes it is expected that when the main deposit is reached this output will be doubled.

Lead mining is well known to be the safest of all metal mining, and as it is considered certain that such powerful lodes as those found on this property will continue to a great depth, this undertaking is believed to bear as little risk as is possible in a mining enterprise, nevertheless it is intended to proceed with the utmost caution, and to sanction expenditure only for the development of the mine until further outlay is absolutely warranted by ore raised or in sight.

It is estimated that the sum of £3 per share will be sufficient to develope the mines and erect dressing floors, and it is not intended to make any further call until the mine has been proved, and then only in the event of further capital being required to provide pumping and hoisting machinery, tramways, &c., and to enlarge the dressing-floors when the main deposit of ore has been reached.

The purchase price of the property is £6000 in cash, 1000 fully paid-up ordinary shares, and 1000 B or deferred shares, which bear no interest unless the net profits amount to £5000 per annum.

The only contracts entered into are—

1st.—That between Leslie Crassweller Hill, of the one part, and James Brend Batten, on behalf of the Lossiemouth Lead Mining Company (Limited), of the other part, and dated 15th of March, 1878.

2nd.—That between Henry Lobb, of the one part, and Leslie Crassweller Hill, of the other part, and dated the 23rd day of January, 1878.

A copy of the proposed lease, and of the contracts and reports, may be inspected at the offices of the solicitors to the company.

FORM OF APPLICATION.

To the Directors of the Lossiemouth Lead Mining Company (Limited).

GENTLEMEN,—Having paid to your bankers the sum of £ , being £1 per share, on application for shares in the above company, I request you to allot me that number of shares, and I hereby agree to accept the same or any smaller number that may be allotted to me, and to pay the balance due thereon according to the terms of the prospectus.

Name in full .....
Address .....
Profession, if any .....
Signature .....
Date 1878.

The Yniscedwyn Company, Limited.

REGISTERED UNDER THE COMPANIES ACTS, 1862 AND 1867.

CAPITAL £60,000, IN 6000 SHARES OF £10 EACH.

£2 per share payable on application; £3 per share on allotment, and the remaining £5 per share in two instalments of £2 10s. each, at two and four months from allotment, when all liabilities will cease.

DIRECTORS.

GEORGE GOWLAND. Esq. | JOHN ROMANES, Esq.
W. H. LETHBRIDGE, Esq. | P. W. SYDENHAM ROSS, Esq.
NICHOLAS SADLER, Esq.
(With power to add to their number).

BANKERS—THE IMPERIAL BANK (Limited), Lothbury, London, E.C.
SOLICITOR—ALEX. KERLY, Esq., Great Winchester-street, London, E.C.
AGENT—Messrs. LIVINGSTON, RICHARDS, AND BEAUMONT, Swansea.

SECRETARY AND OFFICES.

W. H. HARRISON, Esq., 1, PALMERSTON BUILDINGS, LONDON, E.C.

This company is formed for the purpose of purchasing and working the well-known Yniscedwyn and Abercrave Collieries, as well as the Yniscedwyn Steel and Iron Works, situate at Yniscedwyn, about 13 miles from the port of Swansea. The works are connected with the Midland, the Great Western, and London and North Western Railway (having their own branch railways and sidings, all of the standard guage, capable of accommodating at least 1000 railway trucks at one time), and are thus in direct communication with all parts of the kingdom.

This extensive property (over 3500 acres of minerals, about 400 acres of surface, including several farms, a number of cottages, a mansion and agents' houses) is held upon exceptionally favourable terms, under various leases, particulars of which may be seen at the offices of the solicitor.

There are four large collieries, fine iron and steel works, together with a good-sized foundry, and altogether a most efficient plant.

The Four Collieries are all extensive, and contain six seams of the purest anthracite coal, with an aggregate thickness of about 28 ft., and are estimated to contain 37,000,000 tons of workable coal. One of the seams (the celebrated Big Vein) is over 9 ft. thick. There are also veins of ironstone and fire-clay, limestone, &c., all of which are elements of considerable value. The collieries are complete with the most costly plant, engines, boiler power—in fact, no outlay has been spared to bring the whole into the highest degree of perfection. From the pits an aggregate of at least 3000 tons of coal may be produced daily.

The Iron Works are among the oldest, if not actually the oldest established in the kingdom, and everywhere well known as the Yniscedwyn Anthracite Iron Works. They consist of two blast furnaces, hot blast stoves, and complete plant. The furnaces which were recently fitted and remodelled on the most approved principles, have been worked most successfully, producing a larger annual yield of iron per furnace than has been obtained by any other furnaces in this country using anthracite coal.

The two blast furnaces have not only produced pig-iron of the highest quality suitable for steel making purposes, but also spiegeleisen up to 17 per cent. metallic manganese, thereby far outstripping any of the German or other foreign manufactures, and commanding the highest prices in the market. This, of course, is the best test of any, and it is, therefore, scarcely necessary to refer to any other, but it may be worth while to mention that the trials of this iron under Mr. Kirkaldy's great breaking machine, at Southwark, gave some of the best results ever yet afforded with pig iron.

Yniscedwyn iron is in great demand for tin plate works, and, South Wales being the chief seat of the tin plate manufacture, the works are much more favourably situate for supplyidg the pig iron required than the hematite furnaces of Barrow and elsewhere.

The Steel Works have been built under most elaborate designs, and in a most costly manner, but are not yet quite completed. They will require an outlay of between two and three thousand pounds to get into operation. It should be understood that the steel made is not the common steel of the Bessemer or Siemens' process, worth from £7 to £10 per ton, but Sheffield tool or cutting steel, worth £60 per ton, or even more, in samples of exceptional excellence. The trial samples of this steel, submitted to Messrs. Robt. Hadfield and Co., the large steel casting company in Sheffield, realised results never yet obtained by either Swedish or Russian steel and in their printed report it is stated that if only equal quality could be maintained, a full market and high prices were secure. As this steel process is founded on purely practical, though at the same time scientific principles, there should be no difficulty in ensuring the like results from using the like materials the great point being the purity of the fuel, as it is not difficult to purchase fairly good iron ores. Pure fuel, however, is of a most exceptional occurrence, and now that steel is pretty sure to supersede iron for many purposes, it is likely more than ever to command a high price.

Apart from the profit likely to be derived from the development of the steel manufacture, and reckoning only upon a restricted output of coal and a moderate make of iron, the profit may be fairly estimated as follows:—

150,000 tons of coal, at 1s. per ton ...	...	£ 7,500 0 0
15,000 tons of iron, at 6s. 2d. per con ...		4,131 17 0
Equal to		£11,631 17 0 per annum.

This amount of profit would after payment of charges of all descriptions, admit of dividends at the rate of about 14 per cent. on the capital of the company.

That profits to the amount named are the least which may be calculated upon is clearly indicated by careful reports, based upon *data* afforded by the raisings of coal at these collieries for some years, according to which the cost of working a fair quantity of coal would be from 4s. to 4s. 5d. per ton. The numerous orders now in the hands of Messrs. Livingstone and Co. may be taken as a proof that 5s. 6d. to 6s. 6d. per ton may be realised. At the Iron Works an average of over 12,000 tons per annum was produced at a profit of about 9s. 2d. per ton, and during September, 1876, the average cost of making 1153 tons of pig iron was 63s. 9d. per ton. It is calculated that iron can now be made at Yniscedwyn for under 60s. per ton, and as the cost of labour and material is considerably lower than in September, 1876, when iron was made for 63s. 9d., it will be seen that this estimate of cost is not only well founded, but may be said to be an outside one.

From enquiries made at the offices of some of the best firms in South Wales, it has been ascertained that there would be no difficulty in obtaining a ready sale for all the iron which can be turned out at from 71s. to 73s. per ton.

An estimate of the value of the property may to a certain extent be formed from an extract from the balance sheet of the last owners (which will be found with the prospectus), showing the outlay made upon the plant and from the valuations of Messrs. Daniel, who deservedly occupy a very high position as engineers in South Wales. These afford sufficient evidence of the great worth of the property and the very reasonable terms upon which it has been acquired. The valuation of Messrs. Daniel was (as a reference to their reports will show) £137,472.

The plant and machinery are so extensive, and in such perfect working order, that little, if any, expenditure will be required upon them; and, as payment for coal sold will be immediately forthcoming, only a small working capital will be found necessary. To provide against contingencies it has, however, been deemed prudent to reserve a sum of 10,000*l.*, which will allow of a sufficient working capital for all purposes. These properties possess exceptional advantages, which will enable profits to be realised in bad times, when others not so well circumstanced can only be worked at a loss.

An agreement has been entered into, dated 20th July, 1877, made between the Yniscedwyn Iron, Steel, and Coal Company (Limited), of the first part; Samuel Lowell Price, of the second part; Henry Wethered, of the third part; Henry Child Beddoe, of the fourth part; Henry Robert Beddoe, of the fifth part; Evan Pateshall, M.P., of the sixth part; John Alexander Forbes Suter, of the seventh part; William Paterson, of the eighth part; George Bullock Murly, of the ninth part; Thomas Turner, of the tenth part; Frederick Robertson Kempson, of the eleventh part; Henry Oliver Robinson, of the twelfth part; Charles Lingen, of the thirteenth part; John Vibart, of the fourteenth part; Charles Julius Ryland, of the fifteenth part; Henry Murly, of the sixteenth part; the Rev. Wm. Leyland Feilden and Oswald Barton Feilden, of the seventeenth part; Sarah Julia Jay, of the eighteenth part; and Thomas Callender Hinde, of the nineteenth part. Also an agreement, dated 7th day of September, 1877, made between Thomas Callender Hinde, of the one part; and Frederick Warwick and Thomas Thompson the Younger, of the other part. The company obtains the property on the most favourable terms—viz., 3500 fully paid shares, and the discharge of certain claims upon the property in cash, amounting to about £15,000; subject, however, to three existing mortgages, amounting in the aggregate to about £43,750, which may be paid off gradually. The expenses in the formation of the company, including those of Mr. Warwick and Mr. Thompson, are provided for in the above contract by the vendors, who bear all charges to the date of incorporation.

Prospectuses may be obtained on application at the offices of the company, and at the solicitors, where copies of the contracts for the purchase may also be seen.

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—S. Toy, April 3: In the 15 we have now cut into the lode 12¼ ft. It still continues to produce lead, but not sufficient to save for dressing. The lode in the forebreast is very wet, and to day we have cut into more water, which makes against our progress in driving.

BEITWS-Y COED.—H. T. Haley, April 1: Setting Report: To drive south in the shallow adit by two men, the month, at 2*l.* 10s. per fathom; they have a very promising lode, and I think will lead up to ore quickly. To rise in the back of the shallow adit, by four men, to hole to shaft at 6*l.* per fathom; the lode is yielding splendid lumps of lead, and worth 25 cwts. per fathom; and as there is a good lode in the shaft 20 fms. east of this, we may expect a valuable piece of ground in this direction. To drive the deep adit east on a branch gone off in the north side by two men, the month, at 4*l.* 10s. per fathom; this branch is producing a little lead, and I think will prove to be the main part of the lode. The 20 fm level north branch to drive by two men, the month, at 6*l.* per fathom; at present the lode is not quite so good as last week, being mixed with blende and mundic; worth now 1 ton of lead ore per fathom, and looking very promising. The south branch to drive by six men, the month, at 4*l.* 4s. per fathom; the lode here is improving, being much better defined, and more compact; worth about 12 cwts. of lead per fathom.—Engine-Shaft: To sink by six men, the month, at 21*l.* per fathom; the lode is getting stronger, and increasing in size, now nearly 3 ft. wide, with spots of lead and blende throughout, and worth 25 cwts. of lead per fathom. Williams's pitch in back of deep adit for two months, at 5*l.* per ton. We shall have the 12 tons ready to sample by the end of the week.

BLAEN CAELAN UNITED.—The following telegram has this morning been received from Mr. J. Pell, who was unable to report yesterday:—"All well at mine. Lead becoming more solid in winze, worth 50*l.* per fathom. Commenced sinking engine-shaft. Received cheque for Saturday's pay."

BODIDRIS.—H. Hotchkiss, April 2: The various bargains in the mine are being urged on as fast as the nature of the ground will admit. In the 60 cross-cut the end is made up of large boulders of light limestone, and has the appearance as if we are approaching a cavity, at least we are about to have a change, which I hope will lead to the intersection of a good lode in this part of your property. The winze in the bottom of the 45 is in a lode 3 ft. wide, containing good blende and a little lead ore. In the cross cut north I see no change calling for remarks; the ground is hard, but the character is of the best bearing kind. All other places as last week.

CARGOLL.—John Jennings, April 4: The shaftmen are making rapid progress in sinking Bowyer's shaft, which is sunk 9 fms. 3 ft. below the 34, and with good speed I hope to reach the 44—including a 3 ft. fork, and also to divide, case, and bed-plank the shaft to the 44—in about 10 days from this time, after which we shall commence a cross cut south from the 44 to intersect the south lode and intermediate branches. In the 34, east of shaft on the south lode, there is no change since my last report. Here I have put these men to cross-cut north, and in 8 ft. driving have intersected the caunter lode, and are now opening on its course east. The lode is 9 in. wide, carrying a good leader of lead ore in paying quantities, and from its present appearance should think it would open up a good section of ore ground in this eastern direction. The 34, west of shaft, is somewhat improved in appearance, and producing more sandy quartz, with a congenial flookan, which is the best indication for lead ore, and I am anxiously looking forward to good results in this direction. The stope in the back of the 34, west of shaft, is producing its usual quantities of lead ore. There is no change to notice in any other bargain. The engine is working well, and keeping the water with ease.

CLEMENTINA.—J. Roberts, W. Bennetts, April 3: There is nothing new to report in the mine since our report of last week.

COMBMARTIN.—J. Harris, J. Comer, April 4: We are pleased to say that we have just touched the lode, west of Knight's cross-course at the 28, west of Harris's shaft, and so far as seen it has a very promising appearance for the production of lead; we hope to cut through it in a day or two. In the 15 east the lode is fully 4 ft. wide, with strings of good lead throughout, and we are anticipating an early improvement. The adit cross cut is in a beautiful channel of killas, highly mineralised with seams of quartz and mundic containing spots of lead, and the ground is letting out more water, which we look upon as a very favourable feature.

COURT GRANGE.—James G. Green, April 3: Below I beg to hand you setting report for April:—Engine-shaft is down 8 fms. 2 ft. below 65, and sinking progressing favourably. The 65 to drive east to four men, at 170s. per fathom; lode hard and poor. The 45 east to four men, at 100s. per fathom; a slight improvement has occurred here since my last; a promising lode, containing spots of ore. The 30 to drive east to four men, at 190s. per fathom; lode hard and wet, worth 1 ton of blende per fathom. The 14 east to six men, at 175s. per fathom; lode 6 ft. wide, of very promising appearance, composed of spar, gossan, light killas, and lead ore, carbonate and sulphide, worth from 30*l.* to 35*l.* per fathom. To sink winze below shallow adit to two men, at 170s. per fathom; lode 18 in. wide, poor at present. I have also got two men stoping bottom of 14 cross-cut to drain water from 14 west, to enable us to get under the winze referred to. In stoping the bottom of the sail cross-cut we have found a nice branch of lead in the blue rock, worth ½ ton per fathom. We are busily engaged putting in the air pipes in the 30, to enable us to sink a winze in the ore-ground recently discovered in the eastern part of the mine. At the surface we are doing our utmost to complete the machinery, buildings, &c. We are putting in the shaft and centre-pieces of the large wheel to-day. Water is very short for drawing purposes.

DE BROKE.—J. Phillips, April 3: There is no alteration in Wilson's shaft below the 45, or the 45 driving east and west, as these bargains have been under water owing to the snow storm last Thursday and Friday, but they are resumed. In the 35 east near the caunter lode we are stoping the sides and roof to prove the size and value of the lode, and I am pleased to say that this point is opening out very fair, and better than expected; the ore ground in the top of a stope 7 fms. west of this place appears to be extending towards it. The other stopes are yielding ore as usual. In the trial drift east of the stope above the 25 the lode is more condensed, and is again yielding good spots of lead ore, copper ore, &c, Dressing and all other work is now going on regularly, and I shall sample 20 tons of lead ore to morrow.

DENBIGHSHIRE CONSOLIDATED.—R. Prince, A. Francis, April 4: We are now sinking in the bottom of the 66 west, the lode is 6 ft. wide, producing a very fair quantity of lead ore. Our prospects here are most promising, and we shall be much disappointed if we do not meet with a capital course of ore soon. A decided improvement is noticeable in our operations at the eastern portion of the mine; the lode is about 4 ft. wide, composed of spar, blende, shale, and ribs of lead ore. At Parry's, in addition to driving the level, the ground below us is forming what we believe to be our 113 west lode; we are getting most of the ore from here, and the prospects are very encouraging. We shall sell a parcel of ore on Saturday, particulars of which we will send you.

D'ERESBY CONSOLS.—John Roberts, William Bennetts, April 3: The end on the Gorse heading is closing itself more together, and when the converging joints unite we believe that it will make a good lode for lead. We have put two men to drive towards Owen's shaft on Owen's lode. We think there is about 7 fathoms more to drive to get under the shaft, where we are informed by the last men who worked there that there is a fine course of lead. Those men worked there for four years, and the highest tribute they had during that time was 7*l.* per ton of lead, and four men have raised as much as 14 tons of lead, and dressed it with hand labour, in a take of two months. The water eventually drove them, and nothing has been done there since. The adit has been driven for the purpose of draining this as well as the Cobbler's lode. We propose driving under to this shaft, and then put up a rise to communicate the shaft.

D'ERESBY MOUNTAIN.—John Roberts, William Bennetts, April 3: The lode in No. 3 adit end is for the present pinched up rather small. In the No. 4 adit the large Gorse lode is still looking well; worth fully 3 tons of lead and 4 tons of blende to the fathom. The men are making good progress in clearing No. 5 adit level. The masons are busily engaged in building the wheel pit and crusher-house.

DERWENT.—J. Morpeth, April 2: During the few days which have elapsed since writing you the last report the change under ground is unimportant.—Jeffries Shaft—Middle Vein: The 93 east continues as before. The respective yield of the bargains over this level is 20, 15, 20, 26, and 18 cwts. of ore per per fathom; average width of vein, 6 ft. Two men are stripping down sides by day work over the same level, which yield 16 cwts. of ore per cubic fathom The 93 west looks more hopeful, but still of the same worth—3 cwts. of ore per fathom. Some 39 fms. back from the present end four men are cutting sides in this level, at 95s. per cubic fathom; ground worth 23 cwts. The four stopes in the back yield 20, 17, 7, and 12 cwts. of ore per fathom; vein averages in width 3 ft.—Sun Vein: The 70 west continues promising to give good ore in the Little Limestone. The same level eastward is 4 ft. wide, carried 9 ft. high, and yields 18 cwts. of ore for 6 ft. high, or 27 cwts. for the whole height per fathom. The stope in the back is 3 ft. wide, and worth 27 cwts. of ore per fathom. The stope under the 40, 440 fms. east of shaft, yields 6 cwts. of ore per fathom.—Westgarth's Shaft—Middle Vein: The 93 east is in a nice lode, worth for the width we are taking—viz., 4 ft.—1¼ ton per fathom. The stopes in the back of the 74 west are coarse, yielding 10 and 14 cwts. of ore per fathom respectively; average width of vein, 2½ ft. A heavy fall of snow again last night, but the frost is not so intense. Drawing and dressing both being pushed.

DEVON GREAT CONSOLS.—There is nothing new in the report from the mines this week. We sampled on Friday, the 29th ult., 848 tons computed, for sale on the 18th inst.

DUBBY SYKE.—W. Tallentire, March 29: Dubby Syke Level: On the east we have now risen to the top of the down limestone cheek. The vein has produced very nice balls of solid lead ore close up to what we call the black bed, or top of the limestone; this bed is generally unproductive, and it has proved so here. We shall continue the rise to surface for ventilation; when this is done we shall commence at once to stope down the vein, and begin to dress the ore-tuff.

EAST VAN.—W. Williams, April 4: We have resumed the sinking of Tempest shaft for the 70. The 55 cross-cut south has been driven 9 fms. 2 ft. 6 in., the last 7 fms, 2 ft. 6 in. of which has been orey ground, but not sufficiently productive to value. I expect from indications that we shall reach the hanging-wall to-morrow, and as soon as this is done we shall commence driving east and west upon the course of the lode.

EAST WHEAL LOVELL.—Richard Quentrall, April 3: Fatwork: The lode in the rise in the back of the 100 west is not looking so well as at the meeting, and I do not think it would be advisable to continue it much further. We are making good progress in the 80 cross-cut north, which is being driven by six men, at 6*l.* per fathom. The lode at the 4½, east of cross-cut north, still maintains its size, but is not producing quite as much tin as last reported; driving by six men, at 7*l.* per fathom. In the south part of the sett we are opening on the various lodes, for tin, and the lodes are very promising for the depth.

ELGAR.—James G. Green, April 4: I am very pleased to be able to report that good progress is now being made in sinking the engine-shaft, and the men are working with spirit. The 10 east is in a very promising lode, containing fine pots of lead all over the end, but as yet of no value.

GAWTON COPPER.—George Rowe, George Rowe, jun., March 30: We have resumed the drivage of the 82, west of cross-cut on the south lode, which is laid open 16 ft. wide, producing arsenical and sulphur mundic, impregnated with copper ore; altogether of a very kindly appearance. The part of the lode carried in the 95 east is 6 ft. wide, producing arsenical mundic and ore to the value of 1*l.* per fathom, and showing indications of improvement. The lode in the winze sinking below the 105 east is carried 8 ft. wide, which is improved during the past week, and is worth 30*l.* per fathom. The 117 east is continued on the flookan part in easy ground for progress. The tribute department is without change. We

sampled yesterday 130 tons of copper ore, and have about 100 tons of arsenical-mundic on the floors.

GLENROY.—R. Rowe, April 2: At the present depth of the engine-shaft below the 80 it is requisite to fix the plunger, the men are now doing that work; the ground for the cistern is cut, and the cistern made ready to be sent down; everything will be done to resume sinking as soon as possible with a fresh drawing-lift. From the appearance of the present bottom of the shaft the sinking as soon as resumed will go on rapidly; the lode is wide, and there is on the hanging part a course of spar containing some blende and occasional bits of lead. We are now supplied with all necessary pumpwork to carry the mine 20 fms. deeper.

GORSEDD AND MERLLYN.—W. Edwards, April 4: The upper level east, on the new lode, looks as well as ever. We have not yet cut the lode in the cross-cuts, but the appearances are in favour of our intersecting it in a day or two, the lower level cross-cut showing strong indications of our proximity to the lode. I am glad to say that the lower level west, on the old lode, is turning out rich lead ore, although the ground is hard. We shall sell on Thursday next 20 tons of lead ore.

GREAT DYLIFFE.—Evan Evans, April 3: The stope over the 132 east is set to four men, at 3l. per fathom; worth about 6 cwts. per fathom. The stope over the 132 west is set to four men, at 3l. per fathom; worth about 5 cwts. per fathom. The stope No. 1, over the 95 east, is set to 12 men, at 47s. 6d. per fathom, and 30s. per fm.; worth about 1 ton per fathom. The stope No. 2, over the same level, is set to eight men, at 47s. 6d. per fathom, and 30s. per ton; worth about 16 cwts. per fm. The 95 is set to four men to drive east, at 5l. 5s. per fathom; in about a fortnight we shall strip a piece of it and see its value. At the 20 we have two men stripping at 80s. per fathom; this place looks promising for a good stope when stripped through. At the new lode we are driving a fathom or two on a bunch of ore the winze was sunk through some months ago to prepare to rise from this place some tons of ore; set to six men, at 6l. per fathom and 10s. per fathom for raising the stuff. At the upper adit we have two men driving a cross-cut north in search of the Llechwed-du lode, at 5l. per fathom. At the 105, east of Llechwed-du shaft we have four men stoping, at 3l. per fathom; worth about 13 cwts. per fathom. Over the 95 we have two men stoping at 3l. 5s. per fathom; worth about 12 cwts. per fathom. The stope over the 85 west is set to four men, at 37s. 6d. per fathom and 30s. per ton; worth about 1 ton per fathom. At the 95, west of Bradford shaft, a stope is set to six men, at 45s. per fathom and 80s. per ton; worth about 6 cwts. per fathom. We expect this will be better in a few weeks. At the 105, east of Bradford shaft, a rise is set to 12 men at 4l. per fathom; we expect this through in a week or nine days, when the place will be ventilated, and we shall then commence stoping the ground we have already opened in this level. The rise is going up in ore ground worth about 15 cwts. per fathom. To the east of this rise we have two men stripping, at 80s. per fathom, to prepare this ground for stoping. We have ten places set on tribute to 42 men, as follows:—Four men at 4l. 10s. per ton; six men at 5l. 10s. per ton; 18 men at 6l. per ton; and 14 men at 6l. 10s. per ton.

GREAT HOLWAY.—April 4: Level Engine-Shaft: I had greater difficulty than I expected in fixing the 12 inch pumps in place of the 8 inch, but we are nearly all right now, so that the men will soon resume the driving of the 80 yard level, from which I expect great results.—Roskell's Shaft: Our new engine works admirably, and the men are clearing up the shaft.—Partridge Shaft: I am anxious to rise up in the roof of the level, on Partridge lode, as there must be some good orey ground above this point.—Freehold: We have some men clearing here to get to some orey ground. I expect ere long to have parcels of lead and blende for sale.

GREAT RETALLACK.—T. Harris, March 30: We have to-day set the following bargains:—The 53 to drive west of cross-cut, by four men, at 3l. per fathom, the month; the leader part of lode, so far as seen, is fully 3 ft. wide, and worth 3 tons of blende per fathom—a very kindly lode. The 53 fm. level to drive west of whim shaft, by two men, at 3l. 5s. per fathom; lode about 3 ft. wide, containing patches of blende. We also set three pitches on tribute, to four men, for two months, at 30s. per ton for No. 1, and 15s. per ton for No. 2 blende, the men to pay all cost of dressing, &c. I am pleased to say the mine has very much improved within the past week, and I am looking forward for a good run of blende ground in the 53.

GREEN HURTH MINE.—W. Vipond, March 28: The working below the sole of adit level is yielding good ore; in fact, it is just like what we had in driving the level over it when the mine was rich. All the other workings in the mine are about as last reported. The frost and snow have prevented us dressing this week; we have not even been able to work the water-wheel to pump.

HARWOOD.—W. Tallentire, March 29: Herdship Level: North on No. 2 we have a fine looking vein, considering the position it is in; we are driving just below the limestone; it is composed principally of spar. The vein in the south end, at the top part of the limestone, will produce 10 cwts of lead ore per fathom, but the lower part only yields samples. The vein is 7 ft. wide, and has a very kindly appearance indeed.

KINGSTON DOWN CONSOLS.—Thomas Richards, April 4: Bailey's Shaft: In the 172 east the lode continues to present a very fine appearance, is of large size, and will produce 18l. worth of ore per fathom. The stoping of the ground in the west end of the shaft for the skip-road is progressing favourably, and will be completed in the course of a few days. We have commenced putting in the dividings and timber work, and shall get the skip down to the bottom level with as little delay as possible. There is no material change in any other part of the mine. The sampling of ore on Friday last is computed 174 tons

KIT HILL TUNNEL.—H. Bennett, April 4: There is but little change in any of our bargains since last reported on. Next Saturday being the regular setting, a full report shall follow.

LADYWELL.—A. Waters, April 3: We hope to hole the new south shaft to the adit by the end of the present week. The 20, south of this shaft above adit, is in a lode yielding good stones of lead ore. The lode in the rise in the 16 south is worth 1¼ ton of lead ore per fathom. No change in adit south since last reported on. Our next sampling will be 25 tons.

LIVINGSTONE CONSOLS.—W. Vivian, April 4: In the 40 we have commenced to drive west on the course of the lode. The lode is 4 ft. wide, producing good stones of copper and tin. I purpose to push on the 40 and the shallower levels, and from the appearance presented by the lode I have no doubt that good and profitable returns will be made.

LOVELL (THE).—J. Frisk, E. Kempthorne, April 4: At our setting on Saturday last (March 30) the following bargains were set:—The Hownan shaft to sink below the 40, by 12 men, at 22l. per fathom; lode 10 ft. wide, worth 30l. per fathom. The 40 to drive east of Hownan shaft, by six men, at 12l. per fathom; lode 10 ft. wide, worth 20l. per fathom. A winze to sink below the 30, east of Hownan shaft, by six men, at 14l. per fathom; lode 5 ft. wide, worth 12l. per fm. We have completed the casing and dividing of the Hownan shaft from surface to the 40, which will greatly facilitate the discharge of our tinstuff, and effect a good monthly saving. We have also fixed a drawing-lift at the 40, and laid down a line of flat-rods from the engine-shaft to the Hownan shaft through the 20 fm. level, which are answering remarkably well; this, together with the tinstuff being discharged at the Hownan shaft, will put the mine in a better working position than it has been for a considerable time

MELLANEAR.—J. Gilbert, April 3: We set the following bargains on Saturday last:—The rise in back of the 50, west of Gundry's shaft, to four men, at 4l. 10s. per fathom; the lode in the rise is 4½ ft. wide, and worth 6 tons of copper ore per fathom, but the ground is a little harder than usual. The stope in the bottom of the 67, west of the cross-course, to four men, at 2l. 7s. 6d. per fathom; the lode is 7 ft. wide, and worth 7 tons of ore per fathom. The stope in the back of the 67, east and west of No. 1 rise, to four men, at 2l. 17s. 6d. per fathom; the lode is 5 ft. wide, and worth 5 tons of ore per fathom. The stope in the back of the 67, east of No. 3 rise, to four men, at 2l. 15s. per fathom; the lode is 4½ ft. wide, and worth fully 5 tons of ore per fathom. The 90, west of Gundry's shaft, to four men, at 4l. 10s. per fathom; the lode is 2 ft. wide, and worth 1 ton of ore per fathom. The stope in back of the 80, east of Gundry's shaft, to four men, at 2l. 12s. 6d. per fm.; the lode is 6 ft. wide, and worth 5½ tons of ore per fathom. The winze in the bottom of the 60, west of Gundry's shaft, to four men, at 6l. per fathom; the lode is 4 ft. wide, and worth 4¼ tons of ore per fathom. The 80, west of Gundry's shaft, to four men, at 6l. per fathom; the lode is 2½ ft. wide, and worth 2½ tons of ore per fathom. The skip-shaft to sink below the 90 to six men, at 10l. per fm.; the ground is getting a little better for sinking, and we have had no trouble with the water in the shaft during the past week. The rise in back of the 50, east of Gundry's shaft, to four men, at 4l. 10s. per fathom; the lode is 3 ft. wide, and worth 5 tons of ore per fathom. The 70, west of Gundry's shaft, to four men, at 4l. 5s. per fathom; the lode is 4 ft. wide, and worth 2¼ tons of ore per fathom. The 60, west of Gundry's shaft, to six men, at 4l. per fathom; the lode is 4 ft. wide, and is still worth 4 tons of ore per fathom. The 40, west of skip-shaft, to four men, at 3l. 12s. 6d. per fathom; the lode is 2 ft. wide, and worth 2 tons of ore per fathom. There are about 10 fms. further to drive to communicate this level with the 50 east of Gundry's shaft. The 50, west of Gundry's shaft, to six men, at 3l. 15s per fathom; the lode is 4 ft wide, and worth 3 tons of ore per fathom; this level is now just over where the lode divided into two parts in the 60, and we may therefore, calculate that it will for a few fathoms decline a little in value before we again reach the second run of ore ground that we have in the level below. The rise in the back of the 60, west of Gundry's shaft, to four men, at 4l. per fathom; the lode is 4 ft. wide, and worth 3 tons of ore per fathom. Gundry's shaft to sink below the 90 to nine men, at 27l. per fathom; the ground is a little harder for sinking, and we are meeting with occasional patches of spar coming in from the north side of the shaft. The rise in the back of the 100, against the skip shaft, to six men, at 14l. per fathom; this rise is up about 3½ fms.; so far it has been very wet for rising, but it is now getting much drier, and the ground is also more favourable. We also set eight pitches to 25 men, at an average tribute of 7s. 6d. in 1l.

MONYDD GORDDU.—J. G. Green, April 4: I have carefully examined every point of operation in the mine to-day, and beg to report as follows:—Good progress is now being made in sinking. The 24 west is set to six men, at 110s. per fathom; the ground is not squared up under the winze yet, so I have no improvement to report. The lode at present contains spots of copper. The 24 north-east to two men, at 140s. per fathom; there is a small bunch of lead in this drivage, and I think it best to follow it up. The 12 cross-cut north is in 24 fms.; re-set to six men, at 150s. per fathom; similar ground as for some time past. The 12 west to two men, at 90s. per fathom; lode soft and poor. The 12 west stope to six men, at 70s per fathom. The 12 stope on south caunter to two men, at 70s. per fathom. The 12 east stope on junction to eight men, at 100s. per fathom; the value of these stopes is about 30l. per fathom in the aggregate. I have been over the eastern boundary of our sett, and find that there are three powerful lodes going into the hill; one of these I should like to try with a couple of men at this point, as I am informed lead was discovered in it some years ago. Surface operations progressing fairly.

MORFA DU.—T. Mitchell, April 1: The shaft is now down 10 fms. below the level, and if the ground continues as at present we hope to get the shaft deep enough for the next lev l by the end of this month.

NEW BRONFLOYD.—Thomas Kemp, April 4: Setting Report: No. 3 Shaft, North Lode: Six men to drive the 121 end, west of shaft, at 240s. per fathom; this driving, as stated in last report, is turned more to the north, in order to facilitate progress, consequently the main part of the lode is standing to the south; from dialling we have about 6 ft. further to extend this level to get under the point of the winze which is being sunk from the 110. The winze above referred to is re-set to four men, at 240s. per fathom; we have about 4 ft. more to sink this winze to be the required depth for the 121 fm. level. The stope over the 110, east of winze, is set on tribute to eight men, for two months, at 7l. per ton, which includes filling up the workings; the lode is worth from 12 to 15 cwts. of ore per cubic fathom. A tribute piteh in the bottom of the 67, east of shaft, to six men, for two months, at 7l. 10s. per ton, lode worth about 10 cwts. of ore per fathom.—Middle Lode: The part of the lode opened by the 73 end, east of Curtis's cross-cut, is composed of killas, carrying from the roof of the level to the sole a branch from 2 to 3 in. wide, which is nearly solid ore, besides other small strings. I consider the indications here are exceedingly promising, and as the driving proceeds we may expect good results; this bargain is re-set to four men, at 200s. per fathom. Twelve men to tope over the 52 to the east of shaft, at 115s. per fathom, which includes putting in stull and the removal of stuff, lode worth 2 tons of ore per fathom. The part of the lode carried in sinking the winze in the bottom of the 40, east of shaft, has become more favourable for progress, composed of killas, carrying small strings of ore; re-set to six men, at 180s. per fathom. The parcel of silver-lead ore sold to Messrs. Sheldon, Bush, and Co. on the 23rd ult. realised 11l. 17s 6d. per ton, which is ready for transmission. All other work is being pushed on with all possible speed.

NEW SOUTH MERLLYN.—R. Rowlands, April 4: Our operations have much improved, and we are raising good stuff for the dressing floors.

NORTH LAXEY.—R. Rowe, April 2: The lode in the 84 end is about 1 ft. wide, saving stuff for lead, but not enough to value yet. We are proving the lode along the bottom of the 70 in different places, but the water creates a difficulty, which the driving of the 84 may soon remove by draining it at that point. From all that can be seen, and I have examined it closely to-day, I have no doubt of a run of ore ground going below the 70, and which will be certainly met with by driving up the 84, and that shortly. The 60 stope is not looking so well; now worth about 12 cwts. per fathom. The 110 stope is worth ½ ton per fathom. We have from 18 to 20 tons of lead, dressed and undressed.

NORTH TRESKERBY.—J. Nancarrow, A. Nancarrow, April 3: The cutting down of Doctor's engine-shaft is completed to the 12; there is a cistern plat cut below. We are now cutting ground for bearers, and shall fix a lift there next week, immediately after which we shall be sinking the shaft. There has been no lode recently taken down in the 12 east, but in cutting the cistern plat behind the end we have broken some very good ore. There is a large lode in the 12 west, which is not for the present very rich. The lode in the winze below the adit has been squeezed, but looks better in the bottom. The adit west has improved, and there is now a nice leader of ore. The tribute department looks just as usual.

PARYS MOUNTAIN.—T. Mitchell, April 1: The 90 cross-cut south by six men for the month, at 15l. per fathom; the ground is very hard at this point. The rock consists of chert intermixed with small veins of sulphur. The 90 west of cross-cut, on the course of the vein, to two men, the month; this end will yield about 1 ton of copper ore per fathom. The ground here is also rather hard at present, but we are hoping it will get easier for cutting when the lode is likely to further improve for copper. We have again let 11 pitches to 27 men at the usual price.

PATELEY BRIDGE.—Capt. Williams, April 4: The 30, east on Rake vein, has been extended during the month 5 fms.; re-let for the month to six men at 5l. per fathom. The vein in the present end is 7 feet in width, consisting of fluor spar, carbonate of lime, and a good course of lead ore, varying in produce from 3 to 7 tons per fathom; present value 40l. per fathom—a fine looking vein. The 30 west on the same vein has been driven during the past month 6 fms. 3 ft., and for the last 4 fms. the vein has greatly improved both in produce and appearance, being 6 ft. in width, and worth 1 ton of lead ore per fathom; let for the month to six men at 6l. 10s. per fathom. The stope in the back over the 30 east is worth 1 ton of lead ore per cubic fathom; let for the month to four men at 60s. per fm. No. 2 stope in the back of ditto, 20 fms. east of engine shaft, is producing 24 cwts. of lead ore per fathom, and improving; let for the month to four men at 6l. per fathom—ground tight. Fielding's vein in the 20 north-west is 4 ft. wide, and worth 1 ton of lead ore per fathom; let for the month to six men at 50s. per bing for clean ore. The Lumb vein in the south cross-cut in the 20 west is 5 ft. wide, and worth 15 cwts. of lead ore per fathom; let for the month to two men at 50s. per bing for dressed ore. The metal bargain in the 20 east on the Rake vein is worth 1 ton of lead ore per fathom; let for the month to six men at 50s. per bing for clean ore. The metal bargain in the old working under the 20 east has very considerably improved; now worth 26 cwts. of lead ore per fathom; let for the month to three men at 40s. per bing for clean ore. The produce for March is 100 bings of dressed ore (40 tons).

PENNANT.—April 4: We have a full force of men driving east and west at the 133; the lode is fully 4 ft. wide, and looking very favourable. In the 80 west we have cut into a bunch of carbonate, and I have ordered the men to strip the lode down to its full width. The stopes in the 80 and 60 are producing as usual, and the dressing operations are going on regularly.

PRINCE OF WALES.—J. Andrews, April 3: The lode in the deep adit end, west of Vigar's shaft, is looking a little more promising, which is now 1 ft. wide, composed of quartz, capel, carbonate of iron, and some good quality arsenical mundic. There is no change in the lode in the shallow adit end west.

ROMAN GRAVELS.—A. Waters, April 4: The 65 south of new engine-shaft is worth 4½ tons of lead ore per fathom. The 80 south is worth 3½ tons per fm. The men here have commenced rising against Matthew's winze in a lode worth 3 tons per fathom; hope to hole the winze to the 80 this month. The 95 south is worth 2 tons per fathom. The new engine shaft is now 15 fms. below the 95 fm. level. The stopes and other points yielding ore as for some time past. Good progress is being made with the boring machine.

SAINT PATRICK.—William Francis, April 3: I am glad to report another very favourable indication of the approach to a main lode in driving the 120 yard cross-cut north, having just broken into another large cavern at the western side of the cross-course, dipping northward at an angle of about 45°, in which direction it runs for about 8 or 9 yards deep, and for 2 yards higher than the levels, being about 2 to 3 yards long, by from 1 to 2 yards wide. We have also to-day cut a rib of spar running east and west, which seems to be a feeder to the vein. The ore still continues in the driving, occasionally mixed with clay and very congenial compounds. The 60 yard cross-cut has again a little improved for driving, and the chert ground all that could be desired. The progress in both cross-cuts is most satisfactory.

SOUTH CONDURROW.—W. Rich, W. Williams, H. Abraham, April 2: The lode in the 93 east is worth 10l. per fathom. The 93 west is worth 8l. per fathom. The 80 east is worth 8l. per fathom. The 70, east of King's, is worth 7l. per fm. The 70 end west is worth 10l. per fathom. The rise in the back of the 70, towards Plantation shaft, is worth 8l. per fathom. We are carrying only a small portion of the lode in this rise, as our object is to open a communication with the Plantation shaft as quickly as possible. The rise in the back of the 60 west is worth 28l. per fathom. The winze in the bottom of the 50 is worth 36l. per fathom. The 50 east is worth 9l. per fathom. The 40 east is worth 10l. per fathom. The 40 west is worth 10l. per fathom. The ground is favourable for driving in the 30 cross-cut north. The nine men employed at the Plantation shaft are now engaged making room for the temporary lodgment of the stuff at the 50.

SOUTH DARREN.—H. James, April 4: Setting Report: Bishop's shaft is 10 fms. below the 90, and is set to sink 2 fms. more for a fork, preparatory to driving off the 100, and cutting trip lodge, &c., by nine men, at 22l. per fathom; the full width of the lode has not yet been ascertained, there being only 3 ft. wide carried in sinking, which is intermixed with good stones of lead, and improving in depth. The 100 end east to drive toward the shaft, by four men, at 10l. per fathom: in this driving we have now cut the lode, which is strong, and containing a little lead, but nothing to value. The 100 end west to drive by four men, at 9l. 10s. per fathom; value, 1l. per fathom. A winze to sink and stope in the 90 at 14l. per fathom for sinking and 4l. per fathom for stoping: lode worth 2¾ tons of lead ore per fathom. The 90 end to drive by six men, at 8l. per fathom; lode 2 ft. wide, with a little mixture of lead. I expect daily to cut a run of ore ground seen going down in the 80. No 1 stope in back of the 90 by six men, at 4l. 5s. per fathom, 5s. per fathom to be deducted for removal of stuff; lode worth 1¼ ton lead ore per fathom. No. 2 stope by six men, at 4l. 5s. per fathom, 5s. per fathom to be deducted for the removal of stuff; lode worth 1½ ton lead ore per fathom. A new winze to sink in the 80 by six men, at 9l. per fathom. The 80 end to drive by six men, at 7l. per fathom: we are now through the cross joint. The lode close to joint is very small, but is recovering its former strength and value as we advance; present value in forebreast for lead and copper 20l. per fathom. No. 1 stope in back of this level by four men, at 4l. per fathom, 5s. per fathom to be deducted for the removal of stuff. No. 2 stope by four men, at 3l. 10s. per fm., 5s. per fathom to be deducted for the removal of stuff; both worth on an average 10 cwts. of lead ore per fathom. The 70 winze to sink and communicate with the 80 end by six men, at 12l. per fathom; I expect to hole it in a few days. Let by tender the spalling of all the orestuff for crushing mill for one month at 10l. 5s. Notwithstanding the delays caused in our dressing by snow and frost, I shall be ready to sample 40 tons of silver lead ore on Monday next.

SOUTH DE ERESBY.—Thomas Bennetts, April 3: The ground in the cross-cut at the engine shaft towards No. 2 lode is easier for driving than it has been, and I am glad to tell you that we are meeting with some nice branches of lead and blende dipping towards the lode; I believe we shall have a good lode when intersected. There is nothing new in the No. 2 adit end since my last report. They have a fine lode of lead at the Pool Mine; as Pool forms our western boundary this speaks well for South de Eresby. I am certain that when South de Eresby is opened out it will make a splendid mine, and meet with similar courses of lead to those which they have at Pool Mine.

SOUTH MOLTON CONSOLS.—J. Harris, T. May, April 4: We have not been able to do anything in the 22 for the week on account of a stoppage of the engine for 48 hours. We hope the 22 will be in fork again to-morrow. In the 12 driving east the lode is without change, and we have not yet met with an appearance of the north and south lode. In costeaning we have met with a lode carrying beautiful gossan, which shows fine lead, but as to its bearing, we have not cut into it enough yet to express an opinion, but hope to do so in our next.

SOUTH ROMAN GRAVELS.—April 4: Shelve Deep Adit: I have the pipes fixed, which take good air to the men, and good progress is now being made in driving on Nos. 1 and 2 north. No. 1 is driven on 6 ft.; there is a strong feed of water issuing out of the forebreast. No. 2 is driven upon 4 fms. The branch takes its regular course, and it is now from 4 to 6 in. wide, containing spots of ore.

SOUTH TOLCARNE.—William Rich, James Knotwell, April 3: There is nothing new to report on in the boundary shaft sinking below the 30. The shaft is quite dry, and good progress is being made in sinking.

TANKERVILLE.—Arthur Waters, April 4: Watson's shaft is now 10 fathoms below the 192, still going down in a good looking country rock. The winze below the 192, east of shaft, is going down into a wide lode and rich course of ore, the part carried in the winze (6 ft. wide), being worth 6 tons per fathom, and improving. The 192 west is opening out a strong orey lode, at present worth 1½ ton per fathom: the lode here is wet, and the indications point to a cavity and richer lodestuff. The six stopes in back of this level, three east and three west of Watson's shaft, are worth together 11 tons per fathom. In the 152 west we are driving a cross-cut north of the main lode to cut the side lodes. The end has just cut into a lode 1 ft. wide, worth 1 ton per fm. We shall see more about this point in a few days. Other points as for some time past.

TEMPLE.—April 3: The only change since last report is a slight improvement in No. 3 level, which now yields 5 cwts. of lead per fathom, in addition to a little blende. No. 1 level present a very favourable appearance, and produces a little lead, blende, and copper. The weather is still unfavourable for surface operations.

TOLGUS CONSOLS.—W. C. Vivian, April 4: In the 40 cross-cut north we have intersected a branch consisting of quartz and yellow copper ore, having a width which varies from 2 to 4 in., and underlaying about 3 ft. in a fathom north. I have to day broken some good specimens of copper ore from it. The importance which I attach to these small ore veins which we are meeting with in the cross-cut is the fact which they establish that we are driving through a bed or belt of killas rock, which must be congenial for the production of copper, and we are, therefore, encouraged to expect good results on reaching the more important object ahead. In the 40 west, on the south lode, I think the appearances are a little more encouraging; the rock is more favourable for progress than it has been before, and I saw some fine fibres of copper ore in one of the veins. If the directors and yourself resolve on driving this end one month longer, probably you might think well of keeping it going with a less force than six men; four men ought to drive, as the rock is at present 4 fms, or two men 2 fms. per month.

TRELEIGH WOOD.—Wm. Goldsworthy, April 4: The lode in the 56 is 6 feet wide, producing stamping work. The lode in the winze sinking below the 44 is worth 17l. per fathom, but being so very hard our progress is slow. The lode in the 44 west is still disordered by the slide. We have cut the south part of the lode in the cross-cut below the 34, which has drained Reed's bottoms; we hope to have a good piece of ground here. In the 24 cross-cut we have passed through a branch about 2 ft. wide, but we think the main part is further north yet. Our pitches are not looking so well as they were, but as the lode is subject to these changes we look forward to an improvement. The engines and all the machinery are still in good working order.

TREBEIGH CONSOLS.—J. Gifford, April 4: The branch or lode in the 45 south of the engine-shaft is still keeping its course.—Ruby Lode: We have set the Grass shaft to be sunk on its course by two men, sent the month, at 2l. per fathom; lode 3 ft. wide, composed of gossan, quartz, and capel, with arsenical spots of mundic, blende, and lead ore intermixed. No change in other parts of mine.

TYN-Y-FRON.—E. Jones, April 2: We are continuing the driving of the adit level east of the cross-cut on the south wall of the lode, which contains a mixture of lead and blende ores. We find the lode stronger and better in the bottom of the level than in the top, which speaks well for improvement as we get into the hill. I have seen Capt. Jones, who informs me that he has made you an offer of the wheel, crusher, and jigs.

VALE OF CONWAY.—John Roberts, April 3: The lode in the No. 2 adit is now more defined than it has been for some time past, and much larger and richer; it is now 18 in. wide, with a good mixture of lead. We are driving along side so as to take it down by itself. The stopes are worth 1 ton of lead per fathom. The lode in No. 3 adit as it is getting away from the influence of a dyke of hard and disordered ground is becoming larger; now 2 ft. wide, and very congenial for lead. We shall soon be getting under the run of lead ground left in the open cut. The parcel of lead sold, the second since January, will be shipped as soon as we get instructions for its consignment.

WEST GODOLPHIN.—J. Pope, April 3: Setting Report: Caunter: The 70, to sink below Wilson's engine-shaft, by 16 men, at 38l. per fathom; the part of the lode we are sinking on is about 6 in. wide, rich quality tinstuff. I calculate the shaft will be deep enough for the 80 fm. level this week, when I shall put eight men to drive north towards Wilson's lode, and eight men to sink for bearers, cistern, &c. Wilson's: The 70 to drive west by eight men, at 7l. per fathom; the lode is 6 ft wide, worth 15l. per fathom, producing tin; there is more lode standing, which will be taken down as soon as the winze is communicated from the 80 fm. level. The 70 to drive east, to four men, at 8l. per fathom; the lode is 2 ft. wide, worth 8l. per fathom, disordered with a crossing, which I think will soon improve. The 70 to drive south on the caunter lode, by one man and one boy, at 4l. 10s. per fathom; the lode is 1 ft. 3 in. wide, worth 2l. 10s. per fathom, producing tin. The 60 to drive west, on the Pink lode, by one man and one boy, at 9l. per fathom—lode small. The 60 to drive north, on the caunter lode, by two men, at 6l. per fathom—lode small.—Wilson's Lode: The 60 to drive west, by two men, at 8l. 10s. per fathom; I have put these med to drive north to prove if there is another part of the lode standing in that direction. To stope in the bottom of the 60 west, by six men, at 3l. per fathom; the lode is 3 ft. wide, worth 6l. per fathom—producing tin. To sink a winze in the 60 west, by six men, at 7l. per fathom; the lode is 4 ft. wide, worth 10l. per fathom, producing tin. There is more lode standing, which will be taken down as soon as the winze is holed. To stope in bottom of the 60 west, by six men, at 4l. per fathom; the lode is 6 ft. wide, worth 10l. per fathom, producing tin. To stope the bottom of the 60 west, by six men, at 5l. per fathom; the lode is 6 ft. wide, worth 10l. per fathom, producing tin and copper. To stope in bottom of the 60 west, by six men, at 5l. per fathom; the lode is 9 ft. wide, worth 15l. per fathom, producing tin and copper. To stope in bottom of the 60 west, by six men, at 4l. per fm.; the lode is 7 ft. wide, worth 10l. per fm., producing tin and copper. To stope in bottom of the 60 west, by six men, 5l. per fathom; lode 8 ft. wide, worth 12l. per fathom, producing tin and copper. To stope in the back of the 60 west, by four men, at 4l. per fathom; lode 5 ft. wide, worth 8l. per fathom, producing tin. To stope in the back of the 60 west, by four men, at 3l. 3s. per fathom; the lode is 2 ft. 6 in. wide, worth 5l. per fathom—producing tin. To stope in bottom of the 60 east, by six men, at 3l. per sathom; the lode is 4 ft. wide, worth 8l. per fathom, producing tin. To stope in bottom of the 60 east, by six men, at 3l. per fathom; the lode 4 ft wide, worth 8l. per fathom, producing tin. To stope in the back of the 60 east, by four men, at 4l. per fm.; the lode is 4 ft. wide, worth 8l. per fathom, producing copper. To drive the 50 west, by one man and one boy, at 5l. per fm.; the lode is 2 ft 6 in. wide, producing low price tinstuff, and looking kindly for further improvement.—Pink Lode: To drive the 50 west, by two men, at 10l. per fathom; the lode is small. To drive north-west in the 40, by two men, at 8l. per fathom; the lode is 2 ft. wide, producing rich stones of tin. I am not certain if this is Hope lode or the caunter.—Hope Lode: To rise against the new shaft, in the 20, by two men, at 8l. per fathom; the lode is 2 ft. 6 in. wide, worth 8l. per fathom, producing tin.—Wilson's: We have twelve men stoping in the bottom of the 60 east, the lode varying in size from 6 to 22 ft. wide, worth for this width 30l. per fathom: these men are working as directed, but have not taken any contract.

WEST ROSKEAR.—H. Stephens, W. Bennetts, April 4: There is not much alteration in the 12 end since last report; the lode is large, and orey throughout—a very fine lode for the depth. The masons are getting on well with the building, considering the boisterous weather they have had to contend with the last few days; it is fine to-day, and if it continues they will soon get the house in readiness to commence about the engines.

WEST TANKERVILLE.—Arthur Waters, April 3: The 86, south of boundary shaft, is in a lode 4½ ft. wide, worth 10 cwts. of lead ore per fathom. The stope in the back of this level, north of winze, is worth 10 cwts. per fathom. Stope south of winze is worth 12 cwts. per fathom. The lode in the 75 fm. level, south of boundary shaft, is yielding stones of lead ore. The stopes in the back of this level—one north and two south—are worth together 2 tons per fathom. Stopes in the bottom of the 83 fm. level—one north and one south of winze—are worth together 2½ tons of lead ore per fathom. The stope in the back of this level is worth 1 ton per fathom.

WEST WHEAL TOLGUS.—April 3: Taylor's shaft is now 4 fms. 3 ft. below the 145, which is deep enough to enable us to do all the necessary work for putting down the sinking-lift, boring-machine, &c. We shall want to put more men down in this bottom level to cut out the south part of the lode, and to stope the lode in the back from the cross-course to rise, which cannot be done until the skip-road is brought down without a great loss of time and also extra cost. The lode in the end is without alteration since our last report. The lode in No. 2 winze, below the 135, is not looking as well as it was. We cannot estimate it to be worth more than 5 tons of ore per fathom. There is a horse, or patch of killas, in the winze; the ground on the back, or north side of the horse, is branchy and disordered ground. We calculate the north branches in going down will fall into the lode, and increase its size. The winze is down nearly 5 fathoms, and quite dry, which shows the lode must be large and open below. The lode in the 135 end west is all the size of the end, and is a little improved, now yielding 1 ton of ore per fathom. The stopes in the back of the 135 are yielding very well. The lode in the 115 fm. level end west is 2 ft. wide—a kindly end, but not much ore. The lode in the 115 west is a strong kindly one, although poor. There has been nothing done in it until now for more than 12 months, but now we have set Richards's shaf to sink below the 95; it will be well to put on this end.

WHEAL CREBOR.—John Andrews, April 2: In the 120 east no lode has been taken down for the week. The lode in No. 1 stope in the back of the 120 is 4 ft. wide, and worth 10l. per fathom. The lode in No. 2 stope in the back of the same level has slightly improved, and is now 5 ft. wide, and worth 15l. per fathom. All other points are the same as reported last week.

WHEAL GRENVILLE.—T. Hodge, April 3: We commenced to sink Goold's shaft below the 150 to-day. We shall put in twelve men in the said shaft as soon as the 150 is communicated, in order to reach the junction of lodes in the quickest possible time. In the 150, driving north of west, the rock is changed, indicating our near approach to the great lode. The 140 east is unproductive.—Western Shaft: The sumpmen are engaged clearing up the shaft, and also clearing out the 160 east; when this is done we shall resume the end. The 150 east is worth 8l. per fathom. The 140 east is worth 7l. per fathom. The 130 west is worth 7l. per fm. The stopes generally are turning out the usual quantity of tin. During the past week we have experienced some very severe weather, which has greatly retarded our progress with the surface operations; however, I am pushing everything forward as fast as the weather will admit. We are getting on as fast as we can with our south axle; the north axle is at work on poor stuff, beating in the bed, and I hope to get four more buddles at work by the end of this month. We shall commence the building for the calciner next week. The machinery throughout the mine is working nwell.

WHEAL KITTY.—S. Davey, R. Harris, March 30: The men in the various bargains throughout the mine are desuing the lode, consequently we have no change to report this week.

WHEAL NEWTON.—H. Bennett, April 4: Our stopes continue to yield rich silver ore, and we may rely on having a good sampling next week. All other bargains remain much the same as when last reported on. Saturday next being the monthly setting, a full report shall follow

WHEAL UNY.—Wm. Rich, M. Rogers, April 1: The back of the 60 west is worth 8l. per fathom. The lode in he 150, east of west is worth 12l. per fathom. The 140 end east is unproductive. The 150 east is worth 9l. per fathom. The 160 east is unproductive. Hind's shaft below the 160 yields a little tin. The 160 end west is worth 12l. per fathom. The 150 end west is worth 15l. per fathom.

THE WEEK.

SATURDAY, MARCH 30.—Business was done in D'Eresby Mountain shares at 85l., being a rise of 20. on the day. The publication of the report of the meeting induced several urgent enquiries for shares, which could only be satisfied by offering many pounds per share above what was considered yesterday to be the value of the shares. Several transactions were reported in D'Eresby Consols at a premium. Van shares fell to 24 on the dividend (7s. 6d. per share) being lower than was expected. The Linares dividend also shows a reduction, but that of Fortuna is maintained. The foregn and railway departments maintained the recovery shown yesterday after hours when the full force of the panic had been expended, but in no case was there any material improvement. Russian, 1873, rose 10s., to 70l., and Brighton, A, and Dover, A, each ¾. Great Laxey fell to 19½, and Eberhardt to 5½.

MONDAY.—Railway stocks and foreign bonds crept further upwards. Russian, 1873, rose 1¼, to 77¼; Egyptian Preference, 1½, to 54¼; ditto, Unified, ¾, to 29¼. In railways, Brighton, A, advanced 1¼, to 123; Dover, A, ⅞, to 119; and Chatham Preference ⅞, to 83. Metropolitan was tolerably steady at 114, and District at 50½; D'Eresby Mountain shares were again quoted higher, and several transactions took place in D'Eresby Consols at 11; Roman Gravels, 8½ to 8¾; Van, 23 to 23½; Van Consols, ⅜ to ½: Holmbush, ¼ to ⅜.

TUESDAY.—D'Eresby Consols were quoted 12 to 14, and D'Eresby Mountain were dealt in at 85. Roman Gravels relapsed to 8¼, and Van to 23. The railway and foreign departments lost in a short time nearly the whole of yesterday's and Saturday's improvement, Brighton, A, and Dover, A, each gave way ⅝, and Russian, 1873, fell 1¾, to 75½; Colombian and Argentine bonds were not affected by the surrounding depression; the former advanced 2, to 44.

WEDNESDAY.—The markets opened a little steadier, which was not, however, long maintained. At one time great depression was prevalent, prices in many instances falling below what was reached during the panic hour on Friday last. Late in the afternoon a change for the better took place, so that the closing at the last was very little below yesterday; Brighton, A, and one or two others even showed a slight rise. In the mining market the feature was the heaviness of Van shares on selling being attempted. Officially they were quoted 22 to 24, but they were not better than 21½ to 22. Great Laxey and Roman Gravels were offered, while Tankervilie and Pandora were in some request. Port Phillip, 10s. to 12s. Gold Run, ¼ to ⅜. Hultafali, 4 to 4½. Richmond, 9⅝ to 9¾.

THURSDAY.—Van shares fell 2l. (20 to 22), but very little dealing was done. Hultafalls were in some demand, at 4½; the question as to whether lead and blende could be inexpensively dressed—which should really never have been raised—is now finally laid at rest, as successful operations are now being carried on on a large scale. Shares of the Mercantile Bank of the River Plate were in request at

2*l.* They are 20*l.* each, and fully paid; and, looking to the improved state of affairs in South America, also the fact that the debit balance has been reduced some 115,000*l.*, the shares are not altogether a bad speculation. Several other large assets await realisation.

FRIDAY (*Opening*).—Van shares are in some demand at 21¼, which is a rise of 1*l.* from last night. East Vans are also quoted 1*l.* higher (5½ to 6). The Leadhills dividend will be 3s. per share; shares are quoted 3¾ to 4. Buyers offer 4 for Tankerville, and 8¼ for Roman Gravels. The other departments are rather dull, Consols having fallen 1-16th, and Brighton, A, ¼.—*Two o'clock.*—The markets are somewhat firmer, Consols now show no change from yesterday. Russian, 1873, have risen to 76¾, and Egyptian Preference to 54½. Wye Valley, 1¾ to 2; West Wye Valley, 3¼ to 3¾; Parys Mountain, 9s. to 11s. Buyers enquire for D'Eresby Mountain, but few shares are forthcoming. East Vans are hardly so good. D'Eresby Consols are quoted 11 to 13.—*Four o'clock.*—Van shares close 21 to 23, and East Van 5¼ to 5¾, being in each instance a rise of 1*l.* on the day. Carn Brea, 42½ to 45; Dolcoath, 31 to 33; Llanrwst, 1¾ to 2¼; Chapel House Colliery, 3 to 3¼; Newport Abercarn, 4 to 4¼; Cardiff and Swansea, ¾ to 1. The usual 400 tons of lead sold by Van have this week fetched 11*l.* 12s. 6d.

FERDINAND R. KIRK.

TO THE METAL TRADE.

FOR COPPER, TIN, LEAD, &c., apply to—
MESSRS. PELLY, BOYLE, AND CO.,
SWORN METAL BROKERS,
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(ESTABLISHED 1849.)

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, APRIL 5, 1878.

IRON.	£ s. d.	£ s. d.
Pig, GMB, f.o.b., Clyde..	2 11 2	2 11 3
,, Scotch, all No. 1 ...	2 12 6	3 10 0
Bars, Welsh, f.o.b. Wales	5 2 6	5 15 0
,, ,, in London.	5 15 0	—
,, Stafford., ,, .	6 15 0	7 10 0
,, in Tyne or Tees ...	5 10 0	5 15 0
,, Swedish, London ..	9 15 0	—
Rails, Welsh, at works..	4 17 6	5 0 0
Sheets, Staff., in London	8 10 0	—
Plates, ship., in London	6 15 0	7 5 0
Hoops, Staff.	7 15 0	8 0 0
Nail rods, Staff. in Lon.	6 10 0	7 0 0
STEEL.		
English, spring	13 10 0	19 0 0
,, cast	30 0 0	40 0 0
Swedish, keg.....	14 0 0	—
,, fag. ham.	15 0 0	—
LEAD.		
English, pig, common..	17 5 0	—
,, ,, L.B.....	17 10 0	—
,, ,, W.B.	18 10 0	—
,, sheet and bar..18	10 0	—
,, pipe.....	19 0 0	—
,, red	19 15 0	—
,, white*.....	24 10 0	26 10 0
,, patent shot ...	23 0 0	—
Spanish	17 0 0	—
NICKEL.		
Metal, per cwt.	18 0 0	20 0 0
Ore, 10 per cent. per ton.	24 0 0	26 0 0
QUICKSILVER.		
Flasks of 75 lbs., ware.	7 0 0	—
SPELTER.		
Silesian..... ..	18 5 0	18 10 0
English, Swansea	21 0 0	—
Sheet zinc	22 0 0	23 10 0

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than IC quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

TIN.	£ s. d.	£ s. d.
English, ingot, f.o.b...	67 0 0	67 10 0
,, bars ,, ...	68 0 0	68 10 0
,, refined.....	69 0 0	—
Australian	62 15 0	63 0 0
Banca	66 0 0	—
Straits	62 15 0	63 0 0
COPPER.		
Tough cake and ingot.	68 0 0	—
Best selected	70 0 0	71 0 0
Sheets and sheathing.	72 10 0	—
Flat Bottoms	75 10 0	—
Wallaroo	73 0 0	74 0 0
Burra, or P.C.C.	70 0 0	71 0 0
Other brands	69 0 0	—
Chili bars, g.o.b..nom.	62 15 0	63 0 0
PHOSPHOR BRONZE.		
Bearing metal	£112 0 0	
Other alloys	£120 0 0	140 0 0
BRASS.		
Wire	7½d.	7½d.
Tubes.....	7¼	7½
Sheets	8	8¼
Yel. met. sheath. & sheets.	6	6¼d.
Nails composition.....	8¾	9
TIN-PLATES.*	per box.	
Charcoal, 1st quality ...	1 0 0	1 1 0
,, 2nd quality ...	0 19 6	1 0 0
Coke, 1st quality	0 18 0	—
,, 2nd quality	0 17 0	—
Black .....per ton	16 0 0	16 10 0
Canada, Staff. or Gla., at Liverpool	11 10 0	12 0 0
Black Taggers, 450 of 14 × 10	30 0 0	—

REMARKS.—The course of our markets has been downward, and this has enabled buyers to give out several orders that would not otherwise have been the case; however, there is still a very limited trade doing, and importers and holders are great sufferers by the continued depression and depreciation; but they are not wholly blameless, for in some measure they have brought it upon themselves, and they now have to pay the penalty of their imprudence. What was palpable to others was equally plain to them, if they had only exercised ordinary judgment, and for long time past it has required no vast depth of penetration or foresight to arrive at a pretty correct opinion in regard to the tendency of commercial affairs, but, in opposition to the necessities of the times, and contary to all reason, they persisted in pursuing a suicidal policy in upholding prices fictitiously through dull and declining markets, giving undue encouragement to production, and causing accumulation of heavy stocks, and that in the face of political entanglements and general European commotion and distrust. The result is truly unsatisfactory, as might well be expected; and, further than this, we do not hesitate to say that while the political horizon continues so cloudy and unsettled there will be no recovery. Those who have to realise during this period of depression will doubtless have to submit to additional sacrifices, and the only way to get relieved now is to make the best practicable arrangement with buyers, and not to hesitate over trifling differences; the markets are against sellers, and they must do one of two things, either conform to the requirements of buyers or be prepared to shelve their stocks for a considerable time to come. Capitalists can always abide their own time, but the latter plan has not generally answered hitherto, and it is exceedingly doubtful whether it will do so to anyone in the future. To lock up metals is an unprofitable proceeding generally, and, as the markets are so unpromising, it will probably be found more advantageous, bad as the loss may be, to cut the loss at once.

We greatly regret that holders did not act upon this principle long since. It is one which we have strongly advocated all through this eventful period, and had they done so their losses would not have been nearly so severe, and there would have been a great deal more business transacted, in which many would have participated and been benefited. There still exist easy facilities of finance, and, therefore, no very great inconvenience perhaps at present has been experienced, the most unpleasant feature being the loss sustained by holding, and which has to be made up in time in some form. The difference in many instances between the purchase and sale prices is a serious item, from which springs the ridiculously long prices paid to the producer. Whatever could have induced importers to have given such absurdly dear prices, considering the badness of trade, is perfectly incomprehensible, for our markets were known to be considerably overweighted, and that overwhelming supplies were forthcoming. In these days of telegraphy there is no excuse for merchants incurring serious losses, as they ought to be thoroughly posted up as to the state, chances, and prospects of the markets. Before confidence can be thoroughly restored in our markets a large proportion of existing stock should pass into the hands of consumers, and then the markets would be permanently lightened and occupy a sounder position. In order, however, to establish a good tone it is necessary first that the stability of our markets be unquestioned, and to effect this stock must be reduced, supplies moderate, and prices cheapened to such an extent as will ensure safety to buyers. As yet there is too much uncertainty prevailing in commercial and political affairs for any favourable change to be anticipated, and everything will, no doubt, remain flat and reduced in value; indeed, it would be unwise to attempt to advance rates, for that would only render business more limited and difficult, and it is very undesirable to add to the impediments already in existence and operation. The main thing to accomplish is to stimulate consumption, and that will afford the greatest and quickest relief to our markets, and the surest way to this is cheap prices.

COPPER.—The value of this metal has further declined, and its position is more unsatisfactory than before. The hopeless state into which it has fallen is now making strong impressions upon holders, and they clearly see the tremendous mistake they have made in retaining their stocks while supplies were so rapidly accumulating and overwhelming them. There seems to be nothing to prevent the price falling to Rogers' figure—60*l.* for Chili bars, for Messrs. Harrington's circular of March 31 shows the stock of Chili to be still on the increase, there being 17,935 tons at that date, against 17,503 tons on March 15; and, according to Messrs. Merton's statistics, there are no less than 47,362 tons of all kinds of copper over here afloat and chartered. This is about the largest stock on record, and it is evident that the low prices that have hitherto prevailed have made no impression upon producers, and unless some extraordinary demand springs up, of which there is not the slightest chance, prices must further recede. It is undoubtedly a most disastrous state of things for holders especially, happening at a time like the present, when there is little or no opportunity of recouping their loss in any other way; but the principal thing for them to consider is what course now to pursue. To sell and make a loss of thousands, which it involves, is exceedingly impracticable; and yet to go on holding and adding charges, losing interest of money, and the price daily getting worse on account of bad trade and heavier stocks, only means greater sacrifices hereafter. The present position is unsatisfactory—the prospects are cheerless. They are even more threatening, and point to a greater reduction. In 1871, during the Franco-German war, Chili bars were sold at 60*l.*, and at that time the supplies of Australian and other kinds together were considerably less, and the market was chiefly governed by Chili. Now it is very different, as the recent sale of Tharsis (67*l.* 10s.) demonstrates. Lake Superior is also beginning to make itself felt, and 4000 tons, is reported to have just been sold to the Continent at 75 c.i.f. Havre, to be delivered during the remainder of the year. This sale, with that of the Tharsis, will, doubtless, make the French smelters to a great extent independent of Chili bars; and if it does not entirely close the French market temporarily for Chili bars, it will render it a very limited one, and no material diminution will, probably, take place in the Havre stock. The English smelters will only buy to cover sales, and the orders come forward so slowly, for such limited quantities, especially from India, where reduced prices have hitherto invariably produced such a spirited demand, that it is difficult to know in what direction an outlet will be found.

The ordinary channels are fully supplied, yet there is more than enough to spare, and supplies are unchecked. Holders have outstood their market, and were it not for their powerful means the market would utterly collapse; as it is the weak holders have a better chance of realising, and should not fail to take advantage of it. Neither consumers, shippers, or speculators see anything in present prices to induce them to execute orders in advance of their requirements. The home trade is excessively dull, the markets abroad forbid shipments, and speculation is dormant. The market has been brought down to its present low level in the most natural way—by supplies being in excess of demand, and instead of importers letting go the extra quantity at reduced prices, and getting it consumed, they upheld the market so long that stocks at last have accumulated to such a degree as to put the market beyond their control. On several occasions a large consuming shipping trade has been entirely lost simply on account of smelters not being able to purchase the raw material at prices that would enable them to meet the demand. There has been a good deal of bad management arising from false hopes and unsound reasoning, and we hope that holders will not repeat their previous indiscretions, but sell to smelters and buyers generally as soon as a revival sets in. From New York, on March 23, the market report states that the manufacture of copper and yellow metal are in steady demand at unchanged prices. Copper sheathing, 26 c.; braziers, 28 c.; yellow metal, 20 c.; English yellow metal sheathing, 15½ c., in bond. The market for ingot remains in the same torpid condition, holders, however, do not press their stocks, and prices are fairly steady, but not strong; sales at 16½ c. to 17 c.

IRON.—There is no fresh feature of any importance to notice in this metal, and our market continues to assume the same dull appearance as it has exhibited for months past. There is no improvement in the demand, and all expectation of higher prices has long since abated, and the difficulty rather seems to be to maintain current rates, and before a rise we anticipate a fall, not material, for we are already low, but certainly lower quotations. The depression has not wholly spent, and while it lasts it must tend to produce a depreciating effect. Sellers should use every endeavour to meet buyers' limits, if it be only for the sake of keeping business together, as there is no profit to be made out of anything just now, and we must all patiently wait for more prosperous times before seeking enhanced prices, but now that trade is so dull, and there is ample opportunity for considering the best means for promoting and carrying on the production for the manufacture and sale of this metal, we hope that an effective and equitable arrangement will be concluded between employers and employed whereby the future will be secured against any repetition of former disturbances, which have proved so injurious to the trade. The experience of the past few years ought to be sufficient to show both sides that to act antagonistically to one another's interests is alike detrimental to both, and cannot be attended with any permanent benefit or advantage to the English iron trade. Surely the present misfortune which has overtaken the trade is greatly to be attributed to the fallacy of maintaining fictitious prices unduly long, and thereby throwing the trade into the hands of foreign houses. This should at once be remedied, and set about in good earnest. The emergency requires special and speedy measures, and no further delay should take place in arranging the necessary terms and conditions, otherwise when a favourable turn ensues it will be checked or spoiled again by trade disputes. We notice that in the advices from Wolverhampton it is stated that the workmen in the Cullwell Ironworks have accepted a reduction of wages to the extent of 7½ per cent. We wish the Welsh men and Middlesborough men would accept a sensible reduction in their wages, for the greatest loss of trade to England is in these common productions. There would really be a very fair business if the orders which are now sent over to Belgium for execution were placed with English houses. The reduced price of coal now enables makers to manufacture iron much cheaper, and if labour could be procurred also at a cheaper rate the selling price might be further reduced, and to such an extent as would exclude Belgium from our markets.

The attention of the Welsh houses particularly ought to be drawn to this, for they are more immediately concerned in the matter, and their efforts should be directed to the accomplishment of this end, and the only way to do it is to accept lower prices than the Belgian houses. The stock of Scotch pigs, according to the last monthly return, had increased 51 tons, and now amounts to 170,467 tons, with warrants in circulation for 157,300 tons. The stock of Middlesborough iron in Connal Company's stores there is 59,000 tons, being an increase of 6650 tons, with warrants in circulation for 58,300 tons. The various returns continually showing an increase in the stocks are very discouraging to those interested in the trade. But orders are so scarce that few can wonder at the high figures they are approaching. Quotations have in most cases become somewhat easier, and the reports from the several producing districts are, on the whole, rather more favourable, showing a little more activity than they have done of late, the demand becoming somewhat better, and in a few districts sellers have been able to accept lower rates through the men having agreed to a reduction in their wages. At Sheffield, for instance, it is stated they have accepted a reduction of 5 per cent., which has caused business to show some symptoms of improvement, but we are sorry we are unable to note any material improvement. It appears that the orders which are given out, and the contracts which are passed are chiefly very scanty and few, merely being those which are required for prompt delivery, and old ones that have been held back to be transacted at cheaper rates. Business men in this district are expecting and dreading war to break out ere long. Should it do so, manufacturers anticipate no revival whatever in business for a very considerable time to come. Nothing of any material importance is shown in the returns from Leeds, though it is stated that business has become somewhat firmer, chiefly in the supplying of iron for Government purposes. We note no improvement in the export departments, so consequently are unable to state anything better in the demand from abroad than heretofore.

Business is said to be pretty well at a standstill at South Durham and its district. Merchants having purchased such iron as they wanted for immediate delivery, the demand has to a great extent fallen off. However, there are a few enquiries for the various descriptions of iron, chiefly for pig, below the current rates, which masters refuse to accept. Prices have remained without variation, 43s. 6d. having been quoted for No. 1, and 40s. for No. 3; but merchants appear to be very loath in giving more than 39s. per ton. Other kind of iron is reported in a very sluggish condition, bars being quoted at 8*l.* 12s. 6d. per ton, sheets 6s. 5s. to 6*l.* 7s. 6d., and angle iron at 8*l.* 15s. to 9*l.* per ton. Undisturbed quietness is said to reign over the market at Birmingham, the unsettled state of politics impeding business considerably; prices have remained without alteration, and the whole trade appears to be in a most sluggish condition. Although sheets are procurable at the low figure of 8*l.* per ton, still very little business has been transacted in them. Pigs are still quoted at last week's quotations, but very few orders have been carried through, and the contracts which have been accepted have been only for very small quantities. The trade at Newcastle is reported without life, and what little quantity of iron is sold is chiefly for home consumption, the foreign demand being of a very limited character; and the orders which do come over are chiefly at such ridiculously low limits that it is impossible to execute them without making considerable losses by the transactions. The trade in the Rotherham district is said to be rather more lively, and the works better employed, although it is feared that the present activity will not be permanent, and that it is merely a fluctuation in the market. Prices remain without change, those of last week continuing to rule the market.

Business at Barrow-in-Furness is stated to be in a dull condition, and prices show little variation on former quotations. Hematite brands appear to be chiefly in request, and other kinds keep in a sluggish state, with the exception, perhaps, of Bessemer, which appears to be fairly active at 64s. per ton for No. 1, and 61s. per ton for No. 3 forge. Finished iron is in a very poor condition, but ore is rather firmer. The foreign trade is reported to be in rather a sluggish state, although more activity has been shown on the Paris markets, and prices have slightly advanced. Quotations in Belgian iron are said to be slightly firmer, merchant iron being chiefly in request. Very little business is done in pig-iron at New York, as advised by the mail of March 23, and prices are reported to have slightly increased, No. 1 X being quoted $18 to $19, No. 2 X $17 to $18, and forge $16 to $17. There is but a moderate business done in Scotch, Colsness being quoted at $25, Eglinton at $24, and Glengarnock at $24·50. In the absence of business for scrap-iron, $21·50 to $22 for No. 1 wrought from yard is quoted. A fair demand exists for rails at $33 to $36, and for old $19 to $19·50. Manufactured remains without change at previous rates. Scotch pig iron in Glasgow is reported as being much depressed, and 50s. 11d. has been accepted for prompt cash, but business has chiefly been done at 51s. 3d. for cash. Our markets now, however, close at 51s. 2d. to 51s. 3d.

SHIPMENTS.

For the week ending March 30, 1878	Tons	11,499
For the week ending March 31, 1877.....		10,241
Increase		1,258
Total decrease for 1878		4,047
Imports of Middlesborough pig-iron into Grangemouth:—		
For the week ending March 30, 1878.....	Tons	6,300
For the week ending March 31, 1877.....		3,810
Increase		2,490
Total decrease for 1878		1,720

FURNACES.

In blast March 24, 1877	104
In blast March 23, 1878	87

TIN.—Our market has been slightly fluctuating, but the principal business has been at lower prices. There is still a very unsettled feeling about this metal, and both buyers and sellers are puzzled to know how to act—there are certain features in its favour, and there are others against it; the uncertainty is disadvantageous to all parties. The stock in London at the end of last month of Straits and Australian was 8518 against 7660 tons on Feb. 28, or an increase of 858 tons, but the quantity landing and afloat was much less, and reduced this excess to about 60 tons, or if combined with Banca in Holland then an increase of about 200 tons. The deliveries for the month from London were about 40 tons less than in February, and about 80 tons less in Holland. The shipments for the first quarter of the year of Straits and Australian were about equal to those of 1877. The lowest price that we have heard this week is 62*l.* 10s. The question is will the deliveries continue as satisfactory as hitherto, because if they do the price may be fairly upheld, but if not the price must give way. The advices from Rotterdam do not speak very hopefully of the market, and it is said that several thousand tons of tin are lying at Banca and Batavia; if this is the case, and it is only being kept back on account of price, we can quite understand shippers of Straits and Australian being eager to press forward their supplies to market. By the last mail from New York the market was reported firm, notwithstanding the limited demand; the strength was reported to be based more upon the improved statistical position than upon deliveries. The production of tin in the Straits in 1875 was 210,000 peculs; in 1876, 220,000 peculs; and in 1877, 251,000 peculs. Tin-plates were very quiet, charcoal ruling 5 fl. 87½ c.; terne, 5 fl. 75 c.; coke tin, 5 fl. 12½ c., gold; charcoal tin, 5 fl. 75 c.

QUICKSILVER has been reduced in price to 7*l.* A large business was done thereat on Tuesday, but there has since been but a moderate demand.

THE IRON TRADE.—(Griffiths's Weekly Report).—Friday evening. The Glasgow market opened firm this morning with business at 5 s. 2d. This afternoon the market was steady, and G.M.B. warrants closed with sellers at 51s. 2d., buyers 51s. 1½d., exactly the same as the price last week. We quote makers' No. 1:—Gartsherrie, 58s. 6d.; Coltness, 63s. 6d.; Calder, 58s. 6d.; Langloan, 60s. 6d.; Summerlee, 58s. 6d.; Monkland, 51s. 9d., f.o.b. Glasgow; Glengarnock, 57s. 6d., f.o.b. Ardrossan; Shotts, 60s., f.o.b. Leith; Kenniel, 54s. 6d., f.o.b. Bo'ness. The Quarter-day will be held at Wolverhampton next Wednesday, and in the Iron Exchange, at Birmingham, next Thursday. We expect a large meeting at Birmingham. It is decided that no change will take place in the price of iron this Quarter day. It cannot be denied that the resignation of Earl Derby has diminished the brighter prospects which were observed in the Iron Trade. There is, however, a very strong feeling in the country that peace will still be maintained, and if is so there can be no doubt prospects will again brighten, and the trade will improve. We have had a large business transacted over the last three weeks in the raw material. The West Coast, North Staffordshire, South Staffordshire, Shropshire, and Middlesborough have all participated in the advantages resulting from the necessities for stock felt by merchants and the manufacturers.

The trade over the same period in finished iron has been from hand to mouth. The merchants will, therefore, we believe, be ready and willing at Quarter-day to give out orders freely to the manufacturers for all kinds of finished iron; the more because all hope of seeing manufactured iron nominally lower has now passed away. We have been much quieter in our markets this weeks, all orders of magnitude being held over until the Birmingham Quarter-day. We have little change to note in the metals. Tin, about 10s. lower; copper, flat; spelter, weak and drooping. There is no improvement to report in tin-plates. Prices at which I.C. coke are being sold are lower than ever we knew them to be. It is difficult to perceive how present prices are to continue. The misunderstandings with Rowland Winn, M.P., and S. J. Claye, of Derby, are now arranged satisfactorily, Mr. Winn the lessor, having met the company handsomely, and the Lincolnshire Smelting Company will, therefore, blow in one of their furnaces at these works in Frodingham next week.

Messrs. PERCIVAL, SANFORD, and CO.—COPPER is lower in price by about 30s. per ton than it was a month ago, and manufactured is only in limited enquiry.—TIN showed some improvement during the last month, and seemed likely to still further advance; but under the influence of political uncertainties it soon gave way, and it is now cheaper than when we last wrote, to-day's closing price being 63*l.*, with a moderate business passing.—TIN-PLATES: There is a fair demand for most kinds, but makers are unable to obtain better prices.—LEAD is again lower, and there seems no present prospect of improvement.—ZINC and SPELTER are rather easier.

Messrs. VIVIAN, YOUNGER, and BOND—COPPER: Prices have given way about 2*l.* per ton since our last monthly report. Chili bars declined from 65*l.* to 63*l.* for good ordinary brands, and there are sellers over, but there is such a total want of confidence that buyers generally draw back and wait the "march of events." At the close an important sale is advised of 4000 tons Lake Superior for export from America to France at equal to 75*l.* per ton net, delivered at Havre.—TIN: There was a moderate demand during the first fortnight of March at 64s. to 64s. 6d. for foreign, but subsequently the market gave way, owing to the unsettled feeling before alluded to, and sales have since been made at 1s. 6d. to 2s. per cwt. decline from the highest. The March shipments are reported as about 800 tons Australian and 450 tons Straits.

GOLD AND SILVER.—Messrs. PIXLEY and ABELL report—GOLD: As we anticipated in our last circular, withdrawals from the Bank have again taken place to the extent of 233,000*l.*, principally for Germany, and the undermentioned arrivals have also been sent away. The amounts from America, due the end of this week and the middle of the following one, will be sufficient for the requirements of the exporters, and no further withdrawals from the Bank need be apprehended for the present. We have received 20,000*l.* from the Pacific, 25,600*l.* from the West Indies, 5480*l.* from the Cape, 61,000*l.* from the East, 86,500*l.* from New Zealand; total, 198,580*l.* The Nubian takes 50,000*l.* to the Cape, the Para 500*l.* to the West Indies, and the P. and O. steamer 65,000*l.* to the East.—SILVER: Owing to the cessation of orders for America, the price has receded to 54¼d. per oz., at which rate the silver by the Pacific steamer was sold. The market is now quiet at that quotation but little business being transacted at present. The arrivals during the week comprise 238,000*l.* from Germany, 40,740*l.* from the Pacific, 20,700*l.* from the West Indies; total, 299,440*l.*

At Redruth Ticketing, on Thursday, 1565 tons of copper ore were sold, realising 6485*l.* 10s. 6d. The particulars of the sale were—Average standard, 84*l.*; average produce, 8¼; average price per ton, 4*l.* 3s.; quantity of fine copper, 128 tons 8 cwts. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Mar. 7.	1503	£ 87 5 0	8	£4 5 0	10s. 7d.	£52 19 0
,, 21.	2555	93 4 0	6¼	2 19 6	9 8	48 7 0
April 4.	1565	84 0 0	8¼	4 3 0	10 1	50 10 0

Compared with the last sale, the decline has been in the standard 10s., and in the price per ton of ore about 10d.

A large amount of business has been transacted in the MINING SHARE MARKET this week, and confidence seems to be reviving at last, though just at present the chief business is in progressive lead mines, having good prospects of success.

Mining has gone through a long period of depression. We have had unprecedentedly low prices for metals, comparative neglect of dividend mines, and no discovery to cause excitement in young speculations until lately, when D'Eresby Mountain changed the aspect of affairs, and has brought, and doubtless will still bring, a more active demand for mines generally.

TIN MINES are dull, with an entire absence of business. On Monday the smelters again put down the standard for ore 1*l.* per ton. Dolcoath is quoted 30 to 32½; Carn Brea, 42½ to 45; South Condurrow, 10½ to 11; West Godolphin, 1½ to 1¾; Wheal Agar, 3⅜ to 4½; Wheal Grenville, 3 to 3½. Wheal Peevor, 6½ to 6½; we understand that a dividend will be paid at the meeting. Tincroft, 11 to 13; Cook's Kitchen, 2 to 2½; at the meeting the accounts showed a loss on four months' working of 1065*l.*, and a debit balance of 2885*l.* 10s. 3d. A call of 7s. 6d. per share was made. The tin sold realised 2663*l.* 15s., and a lower price than ever remembered before. The winze sinking below the 306 is worth 100*l.* per fathom. At New Cook's Kitchen a call of 4s. per share was made; the accounts showed a debit balance of 1051*l.* 18s. 6d. West Frances, 3 to 3½; at the meeting the accounts showed a loss of 320*l.* 19s. 6d., and a debit balance of 3298*l.* 4s. 6d. The tin sold (109 tons) realised 3898*l.* 7s. 7d.

COPPER MINES, with scarcely an exception, are dull. The standard for copper ore on Thursday declined 10s. per ton. The average price realised per ton of ore was 4*l.* 3s. for 8¼ per cent. produce. West Tolgus, 67 to 69; the sale here (390 tons) realised 2188*l.* West Seton, 10 to 12; the sale here (224 tons) realised 910*l.* Bedford United, 2s. 6d. to 7s. 6d; Devon Great Consols, 2½ to 3; Gawton, 2s. 6d. to 5s.; Hingston Down, 5s. to 10s.; Parys Mountain, 9s. to 11s.; Penstruthal, 4s. to 5s.

LEAD MINES have been largely dealt in, but business chiefly confined to progressive mines. The fall in lead has seriously affected the dividends in some of the expensively worked properties; hence the decline in their prices. Van dropped to 20, but leave off firmer at 21 to 23. The quarterly dividend is 7s. 6d. per share, against 12s. last time. The sale of lead for the month (400 tons) realised 4650*l.*, or 11*l.* 12s. 6d. per ton; blende (200 tons), 575*l.*, or 2*l.* 11s. 6d. per ton. East Van have advanced to 5½, 5¾. Great Laxey are weaker at 18½ to 19¼. The accounts for six months ending February 1 show lead sales (610 tons), 12,165*l.*; lead in stock and ready for sale (500 tons), 7750*l.*; blende sold (2620 tons), 10,515*l.*; total, 30,427*l.* 10s. The costs were 14,297*l.* 9s. 5d. Merchants' bills, 2617*l.* 0s. 2d.; royalty, 2152*l.* 18s. 5d.; freight, insurance, and other expenses, 2923*l.* The dividends paid were—October, 7500*l.*; January 23, 7500*l.*; transferred to reserve fund, 1500*l.*; thus reducing the balance left in hand in August from 12,869*l.* 16s. 4d. to 4974*l.* 6s. The reserve fund stands at 5740*l.* 18s. 8d.; the stock of ores on hand not included in the above accounts are estimated at 12,596*l.* The report states that some of the workings have not proved so productive as they promised to be, which has, of course, affected the produce; but looking at the improvement in certain levels north and in Dumbell's, as well as other fairly promising points in the south ground, together with the strong and healthy character of the lode in depth, the agents entertain no doubt of the continued prosperity of the mine. Roman Gravels, 8 to 8½; full particulars of the meeting will be found in another column. A dividend of 5s. per share has been declared. The lead ores sold in the 12 months (2152½ tons) realised 27,435*l.*; blende (290 tons), 1009*l.* 15s., which made a gross profit of 6436*l.* 16s. 6d. After the payment of a dividend of 5s. (3037*l.* 10s. 6d.) and placing 1500*l.* to a reserve fund, a balance of 543*l.* 19s. was carried forward. Leadhills, 3½ to 4; the directors have declared an interim dividend of 3s. per share.

South Darren, 37s. 6d. to 42s. 6d; the shaft is down to the 100, and lode improving; the 100, west of winze, is worth 10*l.* per fathom; winze below 90 worth 45*l.* per fathom; No. 1 stope in the 90, 22*l.*; No. 2 stope, 25*l.*; the 80 end, 20*l.*; and two stopes in this level each 8*l.* 10s. per fathom. Notwithstanding the hindrance to the dressing by frost and snow in the past month, there will be sampled 40 tons of rich silver-lead ore on Monday. Derwent, 20s. to 30s.; the 93 end at Westgarth's shaft has still further improved to nearly 2 tons per fathom for the width carried—4 ft. Pandora, 15s. to 20s.; the mine looks well, and with an advance in the price of lead will make profits. Grogwinion, 3½ to 4; West Chiverton, 13 to 14; Rookhope Lead, 17s. 6d. to 20s. Tankerville are better at 3¾ to 4¼; the winze below the 192, east of shaft, is worth 6 tons of lead ore per fathom. D'Eresby Mountain have further advanced to 85, 95. D'Eresby Consols, in which a large business has been transacted, leave off 12 to 14; the agents report that there are 7 fms. to drive to get under Owen's shaft, where, when last worked, there was a fine course of lead. Llanrwst, 1¾ to 2¼; North Laxey, 3s. to 5s.; Bodidris, 1¼ to 1⅝; St. Patrick, 1 to 1¼; Temple, 3¼ to 3⅝; West Pateley Bridge, 1¾ to 2¼; West Tankerville, 10s. to 15s.; Wye Valley, 1⅞ to 2¼; West Wye

Valley, 3¼ to 3⅜; Caron, 2¼ to 2⅜, cum div.; South Cwmystwith, 3 to 4; Red Rock, 2 to 2½.

FOREIGN MINES.—Blue Tent, 3 to 3¼; Cape Copper, 30 to 31; Chontales, 7s. 6d. to 12s. 6d.; Eberhardt and Aurora, 5¼ to 5⅜; Flagstaff, 12s. 6d. to 17s. 6d.; New Zealand Kapanga, 10s. to 15s.; Malpaso, ⅛ to ⅜; New Quebrada, 1½ to 1¾; Pestarena, 4s. to 6s.; Port Phillip, ¼ to ⅜; Richmond, 9½ to 10. Hultafall, 5 to 5½; a cable message has this day been received that the dressing machinery is working well, and the mine opening up rich in lead and blende.

The Market for Mine Shares on the Stock Exchange shows the same absence of activity which has been observable for some time past, but holders appear decidedly less inclined to accept minimum prices than they have been recently, so that a general improvement may reasonably be looked forward to. The depression is at least having the good effect of causing greater attention to be paid to the management; and the general return to the calendar month system in Cornwall and Devon would of itself do something towards keeping the mines from bankruptcy. The attempt has been and is being made by the mine agents of the western counties to make the public believe that the question of 12 months or 13 months to the year is a workman's question. This is certainly not the case. The 13-months year does not benefit the working miner to the extent of 6d. per year, because all bargains are set upon the basis of the work to be done; or, to make the matter clear to an outsider, let it be supposed that a level in ground worth 4*l.* per fathom for driving, has to be wrought, the bargain would in every case be set at 4*l.* per fathom, the sole difference being that the taker would be allowed at the rate of 4 fms. stent for the four-weeks month, and 5 fms. stent for a five weeks' month, so that in any case the miner would earn 1*l.* per week. These figures are merely to show the principle; at present any bargain is readily taken by the men if they can earn 15s. per week. It is the agents and day-work men alone who profit by the 13-months year, as they obtain 13 months pay for 12 months work. The 12-months year has already been returned to at many mines; and at the last board meeting in London of the Devon Great Consols it was wisely determined to return to the old system there also. The local managers and agents are naturally opposed to the change, and are using every effort openly and otherwise to prevent it; but it appears that this surplus which these officials have been receiving since the period of prosperity amounts to more than 1000*l.* per annum. The fact appears to be too much mistletoe has been permitted to grow at Devon Great Consols, and this must now be pruned, unless the shareholders are prepared to let the whole of the sap and fruit of the concern be wasted. The return to the 12 months' year is a very favourable way of meeting the case so far as the officers are concerned, for it cannot be doubted that the present position of affairs would fully justify the directors in ordering a reduction of 15 per cent. or 20 per cent. in the salaries of all officials and day work men employed at the mines. This has been done elsewhere, and has been long since submitted to by the workmen at Devon Great Consols, so that there should be no delay in the matter.

The West Prussian Mining Company have declared the usual quarterly dividend on the preference shares, at the rate of 8 per cent. per annum. The directors report that, although the profits would admit of the usual dividend on the A shares, they think it more prudent, considering the present declining value of mineral produce, and the uncertainty of commercial prospects, to withhold its payment.

The latest Comstock advices state that in some of the smaller mines developments are being made which are likely to become important. The small vein of ore lately found in the Silver Hill may ere long lead to a large and valuable deposit. The ore already found is sufficiently rich to pay for milling, and when once the work of reducing it has been commenced there may be found a supply of ore sufficient to run not only one but eventually several mills. The yield of ore at the Justice Mine is thus increasing. The New York, Lady, Washington, and other mines in that section may also in this way become productive of large quantities of good milling ore. The latest advices state that the Bay City Tunnel is worked under lease by the American Mining Company. The work, which is said to be perfection itself, is under the supervision of Mr. G. Cullius and Mr. W. M. Fielly. The Idaho Quartz Mining Company of Grass Valley, California, has just paid its 102nd successive monthly dividend of $7·50 per share—aggregate of this dividend, 23,500.

The difficulties involved in the question of the desirability or otherwise of stopping mines unprofitable, in consequence of the low price of metals were very clearly indicated in the brief discussion between Capt. Thomas and Capt. James, at the Cook's Kitchen meeting on Thursday: "Capt. James expressed a very strong opinion that while tin remained at its present price it was desirable, not only in Cook's Kitchen but in all other mines, that the operation should be restricted as much as possible.—Capt. Thomas: What are you going to do with the people in that case?—Capt. James: The question is how long we are to continue as adventurers to pay money out of our pockets in order to support the working people? That kind of thing cannot go on forever, and what are we to do under circumstances like the present? Can we go on paying calls for a much longer time through mere notions of philanthropy?—Capt. Thomas: It is not altogether from notions of philanthropy. If all the mines in the country got rid of all their hands and the people went abroad, we shall have very few to work our mines supposing that the price of tin went up and that we wanted them back again.—Capt. James: I quite see that. It is difficult to know what to do in times like these.—Capt. Thomas: It is certainly a very difficult problem to solve, but I cannot recommend that we should stop our stopes or pitches." This really shows the importance of pluck and perseverance at the present time. If the men be not kept together now, future profits will be impossible.

St. John del Rey, 300 to 310; the latest telegram from the mines at Morro Velho, dated Rio de Janeiro, March 29, states that the produce for the second division (11 days) of March was 14,000 oits., of the value of 5426*l.*, the ley of the ore being 6·1 oits. per ton, equal to 7·6 oits. per ton by old measurement. Javali, ⅛ to ¼: the loss for the year 1877 was 76*l.*, which is considered more than balanced by ore extracted, but not yet reduced. It appears that, although more ore has been crushed than in the year 1876, yet, owing to a falling off in its average quality, the remittances of the two years are practically alike: 20,370 tons were crushed in 1877, against 17,598 in 1876, the corresponding remittances having been 14,347*l.* and 14,274*l.* There has been expended during the year 1214*l.* on capital account; and the board hope that a much smaller sum under this head will suffice for the wants of 1878. The dry season has set in earlier than usual, entailing a daily cost of 6*l.* for fuel.

Some curious features are being developed in the Eureka (Richmond) district; caves are multiplying on the lode, and there is scarcely a mine that has not one or more of these cavernous openings. The Richmond has recently broken into two, both of which contain ore. The Eureka Consolidated has opened the largest one, and is of immense proportions. The K. K. has one on the 3rd level, the Jackson two, and the Connolly a medium-sized one. Ore is always found in close proximity to these openings in the limestone, and many miners embrace the theory that they eventually fill up with vein matter, constituting the mould for ore bodies, and that the present deposits were filled in this way.

Richmond, 9½ to 10; the usual weekly telegram from the mine at Eureka states that the week's run was $100,000, from 1130 tons of ore. The week's produce of the refinery was $50,000. It is much to be regretted that the executive are continuing to play into the hands of the lawyers by persistently going on with the litigation, in which both law and justice show beyond question that the opposite party is in the right. The latest information to hand states that the Richmond Company has obtained from Judge Hillyer, of the Circuit Court of Nevada, an interim order restraining the Eureka Consolidated Company from working the ground awarded to the latter company in the late suit. As the Richmond appeal is at present pending in the Supreme Court, the present step is merely a slight additional annoyance to the Eureka Consolidated, since the permanent injunction asked for, and which will, no doubt, ere this have been granted to the Richmond Company (as the Eureka had to show cause on the following Monday), will only run until the hearing of the appeal, and will give the Richmond no power to appropriate their neighbours' ore.

Hultafall, 5 to 5½; a telegram received to-day from the mines states that the dressing machinery is working well, and turning our lead and blende in large quantities. The report details the workings, which appear to be opening up satisfactorily, producing in all of the ends almost solid lead and blende. The market for Hydraulic Gold Washing shares remains unaltered, with prices steady at quotations. The whole of the companies represented in this markets are actively at work, with good prospects. The rainfall throughout California has been large, and assures plenty of water for the season. The San Francisco Mining and Scientific Press of March 16 states that the rainfall to date has been:—At Malpaso, 28 in.; Dutch Flat, 43 in.; Sharta, 70 in.; Grass Valley, 46 in.; Cherokee Butler county, 52 in. This should be satisfactory to those interested in the success of hydraulic mining.

Lead mine shares remain without material change, the amount of actual business doing being still very limited. Yet several dividends have been declared during the week, and many entertain the opinion that that metal has now reached its lowest point. The North Hendre Lead Mining Company declared a dividend of 10s. per share at their meeting, on Saurday. On Tuesday Roman Gravels declared a dividend of 5s. per share, payable on April 30. On Wednesday Leadhills declared a dividend of 3s. per share.

Van, 22 to 24; the monthly report shows that the mine is looking as well as usual, and everything progressing satisfactorily. The four-weekly sale on Thursday—400 tons of lead and 200 tons blende—realised 5165*l.* Grogwinion, 3¾ to 4¼; the sale of 150 tons of lead for the month of March realised 10*l.* 16s. 6d. per ton. The agent reports this week that the new shaft below the bottom level is now sunk more than 12 fathoms in a ore richer than any other part of the mine. He says the lode is looking "splendid," and is about 2½ feet wide. All going on satisfactorily at the other points of operation. Wye Valley, 1¾ to 2¼; good progress continues to be made at this mine, and the winze below the 22 east has again increased in value. West Wye Valley, 3¼ to 4; the March sale of 60 tons of lead will take place to-day. The mine is still opening out in a very satisfactory manner at all points, and the 52, or bottom level, is improving. Caron, 2¼ to 2¾, cum div.; the mine maintains its satisfactory appearance, and the bottom level continues to yield ore in large quantities, whilst there exist indications warranting the belief, it is thought, that valuable discoveries will be made at the next and deeper levels. All buildings and surface operations going on well. Red Rock, 2 to 2⅛; all operations going on satisfactorily, and a further parcel of ore being got ready for sale. The new discoveries continue to improve on development. Saint Harmon, 2⅛ to 3⅛; the new lode recently discovered in the 67 crosscut west is still looking promising, and letting out a great deal of water. Some important discoveries are expected to be made shortly on this lode, which is favourable for the production of bodies of ore. The abundance of water is in itself a favourable indication, and the managers are in daily expectation of having something good to report. The cross-cut towards the south lodes is nearly up to the point of intersection, and these lodes are expected to be met with soon, when deposits of mineral are looked for. The dressing of ore is still been pushed forward, and a sale will soon take place. South Cwmystwith, 3 to 4; there has been a considerable improvement at this mine, and the stopes are yielding exceptionally well. The first parcel of 40 tons of lead has been sold at 10*l.* 15s. per ton, and more is now preparing for market.

Pateley Bridge, 3 to 4; The 30 east on Rake vein is worth from 3 to 7 tons of lead ore per fathom—a fine looking vein. The end east on the same vein has greatly improved both in produce and appearance, and now worth 1 ton of lead ore per fathom. Other parts of the mine also looking better. The produce for March is 40 tons of dressed ore. West Pateley Bridge, 2 to 2½; the deepest point of operation—the Craven cross-vein in the 56—continues to improve, and to all appearances opening out a rich course of ore. The agent proposes to sink the winze to the 64, when driving will be commenced to come under the deposit gone down in the 56. Mawston, 55 to 60; operations at this mine are still going on in a satisfactory manner. Hartington Moor, 1½ to 2; the accounts received continue encouraging.

Subjoined are the closing quotations:—

Assheton, ¾ to 1; Carn Brea, 42 to 44; Devon Great Consols, 2½ to 3; Dolcoath, 31 to 33; East Caradon, ¼ to ½; East Van, 5½ to 6; Glenroy, ⅝ to ¾; Great Laxey, 18½ to 19; Hingston Down Consols, ¼ to ½; Leadhills, 3⅛ to 3⅞; Marke Valley, ⅜ to ⅝; Parys Mountain, 8s. to 10s.; Pateley Bridge, 3 to 4; Penstruthal, ⅛ to ¼; Roman Gravels, 8 to 8½; Rookhope, ¾ to 1; Tankerville, 3¼ to 4; Tincroft, 11 to 12; Van, 22 to 23; West Assheton, ¾ to 1; West Basset, ¾ to 1; West Chiverton, 13 to 14; West Pateley, 2 to 2½; West Tankerville, ½ to ¾; Wheal Grenville, 3 to 3½; Almada and Trito, ¾ to ⅞; Argentine, ½ to 1; Birdseye Creek, ¾ to 1; Blue Tent, 3 to 3¼; Cape Copper, 30 to 31; Cedar Creek, ⅛ to ¼; Chontales, ⅛ to ⅜; Colorado Terrible, 1½ to 2; Condes of Chili, ⅛ to 1⅛; Don Pedro, ⅛ to ¾; Eberhardt and Aurora, 5⅛ to 5¾; Exchequer, 1-16th to 3 16ths; Flagstaff, ⅛ to ¾; Frontino and Bolivia, 1⅛ to 1¾; Hultafall, 5 to 5⅛; I.X.L., ⅛ to ¼; Javali, ¼ to ⅜; Kapanga, ⅜ to ⅝; Last Chance, ⅛ to ¾; New Quebrada, 1½ to 1¾; Oregon Preference, 4 to 4¼; Pestarena, 4s. to 6s.; Plumas Eureka, 2⅞ to 3⅛; Port Phillip, ⅜ to ⅝; Richmond Consolidated, 9½ to 10; St. John del Rey, 305 to 315; Sierra Buttes, 1½ to 1¾; South Aurora, ⅛ to ¼; United Mexican, 1¾ to 2¼.

COLLIERIES.—There is little to report regarding these shares, scarcely any business having been done, and prices remaining about the same as last week. What little change there has been in the coal trade shows a slight improvement, and there are many signs of coming better times. It is well known that the condition of the iron and steel markets is an important factor in the consideration of the prospects of the coal trade, and there can be no doubt that the demand for high-class iron and steel is decidedly growing. Of course these trades are by no means as brisk as they might be, or as we should like to see them, but they are considerably better than they have been, and the increasing substitution of steel for iron in many industries, and of iron for wood in many others, has already had, and will continue to have, the effect of increasing the demand, and thus improving the market for these metals. Thus augmented production of manufactured metals will necessitate larger consumption of fuel, and more particularly of that class of fuel which is peculiarly suitable for the purpose. We allude especially to anthracite coal, which is commanding increasing attention just now. The quality of iron turned out from a furnace depends in a great measure upon the purity of the fuel used. Good iron ores are abundant, but good and suitable fuel is scarce. The best class of anthracite coal has been found to favour the production of iron and steel far excelling in quality any produced by furnaces in which the fuel used is of a different character. Hence, we take it as the superior metal is more and more sought after, and as its production is facilitated by the use of anthracite coal, this fuel will come into better demand. But, further than this, recent experiments have proved that with proper appliances anthracite forms the very best fuel for steam purposes, and its use for this purpose is rapidly growing.

It is from these considerations that we have formed the opinions expressed last week as to the prospects of the company recently formed for the purpose of recommencing operations at the Ynisedwyn Coal, Iron, and Steel Works. The Ynisedwyn Company starts under very favourable auspices. It acquires properties well known as having yielded large profits to former proprietors, and famed for turning out anthracite coal, iron, and steel of the very finest qualities. It comences, therefore, with an already earned reputation for the products of its property, and as a matter of fact we learn that the company's agent at Swansea has already large orders in hand. Everything being in full working order the company can commence operations with little or no expenditure, and the capital has, therefore, been wisely kept at a low figure. Even small profits will consequently good dividends upon the shares, and as trade improves the dividends should be very large. The former company paid very considerable dividends, amounting at one time to as high as 50 per cent. The capital of that company was 100,000*l.*, whereas that of the new company is only 60,000*l.*

The prospectus of the Ynisedwyn Company calls special attention to the following points:—

1.—The Ynisedwyn Collieries are the principal ones in the anthracite district, and their position is such that they can compete favourably in the market with all others.

2.—The collieries having been laid out in the most complete and approved principles are capable of raising an aggregate of 2000 tons per day at considerably less than the usual average rate of cost.

3.—The royalties are low, and the difference between them and the usual rate is in itself a good profit.

4.—The company's agents are well known as being among the first firms in the anthracite coal trade. The large quantities of coal which they sell annually (and at present obtained from other sources), together with the numerous orders now in hand, as well as contracts under offer at remunerative rates, may be taken as a guarantee that a market will be readily found at prices which will leave a handsome profit for all the coal that can be raised.

5.—Ynisedwyn iron is among the best of British brands, and realises the highest prices. The quality of the iron when compared with that of others is such that it would probably secure the preference of buyers in all markets.

6.—The whole property is in perfect working order, and there being a ready market for its produce at remunerative rates handsome dividends may at once be calculated upon.

From our own knowledge of the district, as well as of the works themselves, which, indeed, are very well known, we concur in the belief that the prospects held out may be fully realised.

The export trade is still growing, the shipments from the chief ports being for the week ending March 23, 243,117 tons, against 223,162 tons for the previous week. South Wales, as usual, is the largest exporter, the shipments for last week being 103,000 tons.

Alltami shares remain at about 4 to 5. The coal sales for March show an increase over the same period of last year, and the various operations are proceeding in a satisfactory manner. Good reports come from Chapel House. The quantity of coal raised this month will considerably exceed last month's output, and the increase will continue steadily up to about 1000 to 1200 tons per day. All the coal sells as soon as it is raised at prices which yield a good profit. The erection of the new engines has been commenced, and will proceed as rapidly as possible, so that they will very probably be finished in the course of two or three weeks.

Llay Hall shares are quoted nominally 7 to 10. The company are getting plentiful orders for their coals, and find a ready market for all they raise. Cardiff and Swansea are at ½ to 1; Nant-y-Glo and Blaina, 16 to 20; New Sharlston Preference, 3½ to 3¾; Newport Abercarn, 4 to 4¼; and Thorp's Gawber, 2¼ to 2¾.

*** With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence: Colliery Explosions; the London Coal Supply (W. J. Thompson); the Emma Mine—"Exeat Regno Britannicoe" (H. Sewell); At Last! the Last of the Emma (E. W. Taylor); Mining in Colorado (C. S. Richardson); New Quebrada Company; An Examination into the Position and Prospects of Certain Mines—No. 1—Richmond (W. Gabbott); Richmond Mining Company; Spontaneous Mineral Growth (T. A. Readwin); the Tin-Plate Trade; Iron and Steel Institute; Public Companies and Liquidation; Review of the Cardiganshire Mines—No. II.; Metalliferous Mining in North Wales; the Flat Measures of Denbighshire; Mining in Cornwall; Cornish Silver-Lead Mines; Unwrought Mining Ground of Cornwall; Great Wheal Rodd Mine (A. Treleare); Silver-Lead Mining (R. J. Rutter); Lead Mining in the North—Pateley Bridge Lead Mining and Smelting Company; Lead Mining in the North of England; Penstruthal Consols (R. Symons); Kit Hill Tunnel (R. Symons); Alleged Collapse of the Kit Hill Tunnel Scheme (T. Vosper); Blaen Caelan Mine (J. Pell, G. Green); D'Eresby Mountain Mine; Kingston Consols Mine; Pandora Lead Mine, Llanrwst; Mineral Resources of Ireland (J. Ryan); Mining—the Five-weeks Month—Registration of New Companies—Cornish Pumping Engines—Meetings of Economic, Great Laxey, Roman Gravels, Combellack, and Paracombe Companies.

PATELEY BRIDGE (Lead).—The Rake vein in the 30 east continues to open out in a manner confirming the most sanguine anticipations—it is 7 ft. wide, yielding from 3 to 7 tons of lead ore per fathom, the present end being worth 40*l.* per fathom. At this point there are no less than 35 fathoms of backs. The same lode in the 30 west has further improved, now worth 1 ton of lead ore per fathom, and presenting favourable indications. The other lodes have advanced in value, as also the stopes. The returns for the month are 40 tons, which should leave a good profit. It is satisfactory to see this grand old mine is now responding to its traditional value.

LEAD MINES.—In the past week the Van Company has declared a dividend of 5325*l.*, the Roman Gravels Company 300*l.*, and the Leadhills Company 3000*l.* These amounts are considerably less than usual, owing to the great depression in the lead trade, and the consequent exceedingly low prices for ore, which are less, we believe, than they have been for at least 20 years past. A number of younger mines are progressing most favourably, and some of them would now be making good profits if the ores realised the prices of a year ago. Among these we may mention Pandora and West Tankerville, while Tankerville, South Darren, and Rookhope are even now working at a profit, and when a favourable change occurs in the lead market (which is likely not far distant) a considerable advance will take place in the value of all the above mines.

ASSHETON AND WEST ASSHETON.—The monthly sales of lead at present about cover the working costs. Had the price of lead been as it was some 12 months since—14*l.* 10s.—instead of 10*l.* 10s., as now, very fair profits would be made. The mines are being wrought with the strictest economy, and look forward to an early recovery in the price of lead to do well.

ZINC ORES.

ARMAND FALLIZE,
INGENIEUR-CIVIL, A LIEGE (BELGIUM),
BUYER

1.—CARBONATED AND OXYDED ZINC ORES (CALAMINE, &c.)
2.—ZINC AND LEAD ORES MIXED TOGETHER, BUT DRESSABLE KINDS ONLY.

CAPPER PASS AND SON, BRISTOL
PURCHASERS OF
LEAD ASHES, LEAD SLAGS, SULPHATE OF LEAD, HARD LEAD, BRASS SLAGS AND ASHES, COPPER REGULUS, MATTE, SCORIA, TIN ASHES, TERNE ASHES, &c., and MIXED ORES or REFUSE, containing LEAD, COPPER, TIN, or ANTIMONY.

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184, BUCHANAN STREET, GLASGOW,
EXECUTE COMMISSIONS FOR THE PURCHASE AND SALE OF SCOTCH PIG-IRON WARRANTS.
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SPEAR AND JACKSON, Etna Steel Works, Sheffield; and JOHN SHAW, Yorkshire Wire Rope Works, Sheffield.
Steel and Steel Tools, Pig and Manufactured Iron, Hemp and Wire Ropes for all purposes, Indiarubber Goods, and Furnishings of every description for Collieries, Founders, Engineers, Saw-millers, &c.

Exhibition Prize Medal—New South Wales, 1877.

AUSTRALIAN TIN—"KANGAROO" BRAND.

Having recently succeeded in REFINING the AUSTRALIAN TIN to the HIGHEST PITCH OF PURITY, the Undersigned is prepared to SUPPLY an article equal to the BEST REFINED ENGLISH.

The uniform assay of the "Kangaroo" brand ranges from 99·70 to 99·90 pure tin. An exhaustive comparative trial of various brands of Australian tin (see annexed report) have proved the

"KANGAROO" BRAND

To be superior to all other Australian tin, and equal to best refined English.

COPY OF REPORT.

"Sydney Galvanising Works, Sydney, Oct. 1, 1875."

"DEAR SIR,—I have much pleasure in stating that I have found the tin smelted at the 'Kangaroo' Tin Smelting Works superior to any other Australian smelted tin I have used in my business up to the present time, and in no way inferior but quite equal to the celebrated 'Lamb and Flag' tin.

This opinion has been arrived at after several carefully executed practical tests, as well as from metallurgical assays.

"I am, dear Sir, yours faithfully,

"S. L. Bensusan, Esq." (Signed) S. ZOLLNER."

Messrs. JOHNSON, MATTHEY, AND CO., the well-known Assayers, report on 24th December, 1875, on a shipment ex Durham, 25 tons of "KANGAROO" TIN, 99·95 per cent. pure tin.

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SPECIALITIES.—COPPER MINING: The Smelting of Copper and Argentiferous Copper Ores, with wood fuel or coal in reverberatory furnaces, into matte of 70 per cent., the silver increasing five times. Ten years' practical experience in Chile.—The Reduction of Native Sulphur Ores, as practiced in Sicily, without fuel or iron pans. Six years' practical experience in Spain.
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330, PINE STREET, SAN FRANCISCO (ROOM 4).

OF INTEREST TO COPPER MINERS AND NATIVE SULPHUR PRODUCERS.—The attention of our mining readers is called to the card of Mr. Henry Sewell, M.E., in our advertising columns to-day. Mr. Sewell, who is well known on this coast, in Europe, and South America, makes a speciality of copper mining and the smelting of argentiferous copper ores to matte of 70 per cent.; at the same time this operation increases the percentage of silver five times; this process he carries out in reverberatory furnaces with wood fuel. He has had ten years' practical experience in Chile; also, he is master of the mining and reduction of native sulphur ores without fuel or iron pans, according to the Sicilian method, for which Mr. Sewell had a patent in Spain, where he carried out this process most successfully in several provinces.—*San Francisco Evening Post*, March 2.

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be *filed* on receipt; it then forms an accumulating useful work of reference.

SMELTERS' BELLOWS.—Can any of your correspondents supply me, through the medium of the Journal, with the names and addresses of the makers of smelters' bellows?—C. W.

DERBYSHIRE LEAD.—Please state in Saturday's Journal the current price of Derbyshire lead—blue, white, and brown.—F. G. S.—[The Derbyshire lead does not appear to be much known on the Metal Market, and we can learn very little about it. We are, however, informed that the pig usually rules about 10s. above London prices, and white and red 10s. to 20s. per ton; we also hear that it is of variable quality, but we regret we can afford you no positive information—perhaps some correspondent can.]

AZTEC.—In reply to your correspondent, "G. L." (Middlesborough), in the Journal of Feb. 2, I have to inform him, through you, that having made enquiries in the late Trinity district I with pleasure furnish him with the following particulars, as he desires. The Savannah is claimed by two differet parties through a relocation. A title could, doubtless, be obtained for, I think, a small consideration, as there is now nothing being done in the camp. The San Francisco is owned by parties living here in the county, and could also be obtained. Bodie is a new mining camp, and there are several mines (over 20) which are not yet incorporated.—W. A. MATHER: *Bodie, Mons. Co., California, March* 13.

Received,—"W. A. S." (New York)—"H. S." (San Francisco): We have not received the MS. referred to. Nothing further has transpired respecting San Pedro. The other matters have been attended to.—The promised letters from "G. A. S." (Boston) will be very acceptable—"W. B." (D'Eresby Mine, Llanrwst)—"Dealer" (Copper)—"F. G. S" (Brighton)—"Constant Reader" (Torquay): Perhaps next week—"T. G."—"Another Shareholder" (Kingston Consols)—"J. S." (Sunderland)—"N. S." (Plymouth)—"T. E. C."—"C. W."—"J. B. B."—"S. S. L" (Barrow)—"W. E. J." (Hultafall)—Thos. Dunn (St. Breward Consols): Next week—"Shareholder" (Wheal Uny).

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, APRIL 6, 1878.

OUR NAVAL ARMOUR PLATES.

Owing to the critical state of affairs now existing between England and Russia more than ordinary attention is being paid to the condition of our ironclads and their power of resisting the monster projectiles that are now made, so that the time appears opportune for stating how we are situated as to the present and the future with respect to the defensive armour of our ships. The great increase which has taken place in the size and calibre of artillery since our "wooden walls" were superseded by hulls made of rolled iron has led to constant changes. So long as plates 10 or 12 in. in thickness, backed with an inner skin of teak (which latter shows a much greater resisting power to a direct thrust than any other description of wood), were able to show a fair amount of resistance to the cannon then in use, and were not totally penetrated or destroyed, no particular attention was devoted to the thickness of iron for sheathing vessels of war. But as soon as our makers of guns, such as Sir W. ARMSTRONG, commenced turning out artillery of greater power and size than had been contemplated by our own and other Governments, then our authorities became alive to the necessity of having plates made of sufficient thickness to resist their power. Hence of late years we have had displays at Shoeburyness, and the battles between the Sheffield plates of BROWN'S and CAMMELL'S, and the projectiles from the heaviest guns produced by the English Government, which have been carried on, at last culminating in the complete success of the guns over the heaviest plates combined with timber. The result has been that no plates yet produced can stand against the bolts discharged by our own 63-ton gun, at present the largest belonging to the English Government, although within the last fortnight some of the ARMSTRONG 100-tons have been ordered. The latter is the heaviest piece of ordnance yet made, and has been successfully tested by the officials of the Italian navy, and was able to penetrate plates 22-in. in thickness, the largest yet rolled by either BROWN'S or CAMMELL'S, who have the monopoly of these monster rollings of iron. From the experiments made, however, it is evident that even 22-in. plates with a backing of wood have not the slightest chance in competing with a 100 ton gun, whilst the attempts made at home to secure greater resistance by having a couple of plates each 8 or 10 in. in thickness with layers of teak between them in sandwich fashion have been equally powerless in resisting the force of shot and shell projected by heavy guns. No doubt plates of much greater thickness than any yet made could be rolled at the works in Sheffield, but then they would not only seriously affect the buoyancy and speed of the vessels, but would occupy greater space than could be afforded. There must, therefore, be a recognised limit as to the weight of the carcase of our war vessels, seeing that they not only require very heavy armaments, machinery, and stores, but a high rate of speed as well. Under such circumstance plates of a certain weight and thickness can only be adopted, and in no instance is it likely that iron more than 24 in. thick can be allowed for the hulls. But as such plates would be vulnerable when pitted against existing heavy guns, attention has of late been paid to the production of plates made of steel and iron, and in the making of them every assistance has been rendered by our own Government, but so far the results have not been favourable.

The prevailing idea, however, is that steel and iron can be so welded together that with a less weight of the two metals than of iron alone the resisting power would be much greater. That such a combination would be very powerful is only what might be expected, seeing that with Bessemer rolled iron, by far the toughest made, the tenacity in pounds per square inch lengthwise is given at 72,648, whilst Bessemer steel bars hammered or rolled have a tenacity of 152,912 pounds to the square inch. Plates of steel and iron have been made by BROWN, CAMMELL, and Sir J. WHITWORTH, and a short time since were tested at Portsmouth, but decidedly failed. Only last week some plates were again sent from the Atlas Works, Sheffield (Sir J. BROWN and Co.), made of two-thirds steel and one-third iron, and on being tried broke down bodily. On the same occasion it was expected that some plates would have been sent from CAMMELL'S for testing, but they did not arrive. Although, then, for the present it may be said that combined steel and iron plates have failed there is no reason why they should not ultimately succeed. It is probable that against powerful projectiles from heavy guns steel of a certain quality is necessary, and as Mr. BARLOW has told us sufficient trouble has not been taken in its production, for he says—"We do not possess the means without elaborate testing of knowing whether the article presented to us is of the right quality." To find the best quality of steel for a certain purpose is not an easy matter, and to really do so many samples should be tested, and the ingredients composing them and their properties known, so that the quality found to be the best could be easily reproduced. Thus it has been proved that carbon to a certain extent gives hardness, elasticity, and resistance to statical and sudden strain, whilst manganese in different proportions gives hardness, toughness, and malleability, as well as elasticity. On the other hand, one-fifth or a third of 1 per cent., and even less of foreign material, will change the character of the steel altogether. This shows how necessary it is that analysis of steel should be far more complete and exhausting than it now is, seeing that whilst one quality may be suitable for some purposes it would be useless for others; therefore, we may yet expect to have a quality of steel produced by severe analysis that will be well adapted for plates for our armour clads in connection with iron. Attention in that direction is now being directed, for we find that Sir J. WHITWORTH has just taken out a patent for mixed plates of steel and iron, the testing of which will be looked forward to with considerable interest.

As we have before stated, wood has been found particularly suitable, in connection with iron, in resisting the effects of shot fired from heavy guns, but we find that a substitute has been found for it that in all probability will be found to act well on board our vessels of war. Mr. HOWELL, of the Brook Steelworks, of Sheffield, proposes lining the decks of our fighting ships and their hulls under water with india-rubber, and it is about to be tested on board one of Her Majesty's vessels. From the expansive power of the material it is believe it would cause the holes made by shot to close up quickly, whilst it might also be found capable of being adapted in connection with plates of resisting heavy projectiles to a greater extent than other material. At present our imports of caoutchouc are at the rate of nearly 1000 tons a month, the value being less than 10*l.* a ton. It may be said with respect to india-rubber that elasticity under ordinary circumstances is one of its prevailing features in an ordinary temperature, but by special treatment the elasticity can be overcome. According to FARADAY the rubber is composed of 87·2 of carbon and 12·8 of hydrogen, and can be adapted for many purposes by different modes of manipulation. When rolled between cylinders it can be made of any thickness, or cast in moulds either solid or hollow. By being vulcanised by means of sulphur it is not affected by temperature, and does not lose its elasticity. The rubber can also be indurated by means of a large quantity of sulphur, and becomes so hard as to be worked with the file, saw, and lathe the same as any ordinary metal. From the material having great tenacity as well as elasticity, and being completely homogeneous it is difficult to say to what purpose it may not be successfully applied, and it is quite probable that it will yet play an important part in connection with iron and steel plates for the protection of British ships of war. We have, however, given the position we are at present in with respect to the plates and sheathing intended to meet the requirements of our ironclads as against such projectiles as may be sent against them in the event of our going to war. Although the plates are certainly not all that could be desired, our vessels taken together are far more powerfully plated than those of any other power.

THE COPPER TRADE.

During the quarter ending March 31 the quantity of copper ore, the produce of Cornwall and Devonshire, sold at the Cornish Ticketing, was 12,330 tons, which contained 805 tons 18 cwts. fine copper, and realised 45,407*l.* 12s. 6d., being equal to an average of 3*l.* 13s. 8d. per ton of ore, and 56*l.* 7s. per ton of copper in the ore. During the same period the British, colonial, and foreign ores sold at Swansea amounted to 13,076 tons, which contained 958 tons 2 cwts. of fine copper, and realised 56,469*l.* 10s. 6d., being equal to an average of 4*l.* 6s. 4d. per ton of ore, and 58*l.* 19s. per ton of copper in the ore. The average produce of the ore sold at the Cornwall Ticketings was 6¼ per cent., whilst that sold at Swansea gave an average produce of 7 5-16 per cent. From this it will be seen that the aggregate sales by ticket were 25,406 tons of ore, containing 1764 tons 0 cwts. of fine copper, and realising 101,877*l.* 3s. The subjoined is a summary of the periodical sales at the Cornwall and Swansea Ticketings respectively. The ores sold at the Cornwall Ticketings were—

Date.	Standard.	Prod.	Price.	Per unit.	Tons.	Fine cop.	Amount.
Jan. 3...	£ 89 7 0	8⅜	£4 14 6	11s. 3½d.	1580	132t. 1c.	£ 7,454 10 0
17...	94 4 0	6¼	3 12 6	10 8½	2782	188 9	10,698 15 0
31...	88 13 0	8	4 6 6	10 10	1273	101 11	5,500 4 6
Feb. 21...	97 8 0	6½	3 3 6	10 4½	2637	106 15	8,403 14 6
Mar. 7...	87 5 0	8	4 5 0	10 7	1503	120 9	6,377 15 6
21..	93 4 0	6¼	2 19 6	9 8	2555	156 13	7,572 13 0
Total for the quarter					12,330	805 18	£45,407 12 6
Quarter ending December, 1877					13,260	920 3	46,619 18 0
Quarter ending September, 1877					14,111	983 2	53,330 11 0
Quarter ending June, 1877					13,013	913 19	57,041 9 6
Total for the year 1877					52,724	3623 2	£202,389 11 0
Showing a quarterly average of					13,181	905 16	50,597 8 0
Corresponding quarter March, 1877					13,407	898 14	56,354 9 0

The ores sold at the Swansea Ticketings were—

Date.	Standard.	Prod.	Price.	Per unit.	Tons.	Fine cop.	Amount.
Jan. 1.	£88 7 0	5 15-16	£3 11 3	12s. 0d.	2535	149t 18½c	£9,029 18 0
22.	86 18 2	6 5-16	3 14 7	11 10	2334	147 3½	8,704 0 6
Feb. 5.	86 18 5	7¾	4 11 11	12 0½	1995	145 2	8,754 3 0
26.	86 1 5	7¼	4 13 0	12 0	2539	196 18	11,814 7 6
Mar. 19.	82 3 5	8 11-16	4 18 11	11 4½	3673	319 0	18,167 1 6
Total for the quarter					13,076	958 2	£ 56,469 10 6
Quarter ending December, 1877					10,236	724 3	40,767 11 0
Quarter ending September, 1877					17,972	2220 13	133,294 18 0
Quarter ending June, 1877					11,016	1828 7	124,088 13 6
Total for the year					52,300	5731 5	£354,620 13 0
Showing a quarterly average of					13,075	1432 16	88,655 3 0
Corresponding quarter, Mar., 1877					10,191	1513 1	109,880 7 0

OUR RAILS IN AUSTRALASIA.

In times of such continued dulness as the present, when political complications have still further prostrated many struggling industries, it is not a little cheering to find that the demand for our railway iron in the Australasian colonies is still active. Thus in the first two months of this year British railway iron was exported to our Antipodean group of dependencies to the extent of 11,955 tons, as compared with 6770 tons in the corresponding period of 1877, and 6043 tons in the corresponding period of 1876. The increase was also still continuing in February, the exports of that month having been 5970 tons, as compared with 3414 tons in February, 1877, and 2394 tons in February, 1876. The Australasian demand for our railway material is thus moving on this year at the rate of from 60,000 tons to 70,000 tons per annum, and this must be regarded as a precious resource in these days of long-continued and utterly disheartening depression.

The causes of the considerable consumption of our railway iron which is now taking place at the Antipodes are twofold. In the first place, the credit of the various Australasian Governments has become deservedly strong. Australian financiers are sound, honest, and able; and while South American republics and some of the doubtful despotisms of Europe have been going utterly to the bad from a financial point of view, Australian Government bonds have been steadily growing in favour. At the present moment we find New South Welsh 4 per cent. at par, New Zealand 4½ per cent. at 97, Queensland 4 per cent. at 94½, South Australian 4 per cent. at 96, and Victorian 4 per cent. at 96½. In presence of such quotations as these, it is easy to understand that the various cabinets of Australia can raise practically any amount of capital; and we can but rejoice that this should be the case, since such a state of affairs implies a steady progress on the part of all the members of the Australasian group of settlements. The capital raised for railway purposes in such colonies as New South Wales, Victoria, Queensland, South Australia, and New Zealand, enjoying as it does a guarantee of interest from the treasuries of some member of the Antipodean group of settlements, no loss can be sustained by investors, and hence any appeal to credit made by any Australasian treasury is responded to with great promptitude and readiness. This is the first cause of the large demand which has prevailed in Australasia for our railway iron for several months past. The second cause of this highly encouraging demand is the cheapness of steel and iron rails at the present juncture. Colonial governments are prudently endeavouring to construct the railways which they are establishing upon the cheapest possible conditions; and, of course, cheap rails greatly assist the development of such a policy. But the fact cannot at the same time be denied that while the cheapness of rails has a tendency to stimulate the consumption of them, and to give by consequence a show of statistical strength to the trade, the margin of profit realised upon the sales effected is little satisfactory.

Another consideration which must not also be overlooked when we are dealing with the question of the Australian demand for our railway iron is the fact that in New Zealand, at any rate, the railways recently constructed have been attended with meagre financial results. Thus while in the year ending November, 1877, there were 924 miles of railway in working in New Zealand the net profit realised from the mileage in question during the twelve months under notice was only 24,622*l.* It is true that these 924 miles of New Zealand railway must have contributed very materially to the general progress of New Zealand, and must have increased by consequence the tax-paying powers of the colony. Still the New Zealand Government may possibly pause a little in its work of railway extension.

MINING IN NOVA SCOTIA.—We have been favoured by Mr. H. S. Poole, F.G.S., the Government Inspector of Mines, with the report of the Department of Mines, Nova Scotia. The production for the year was—Gold, 16,882 ozs.; iron ore, 18,603 tons; manganese ore, 97 tons; copper ore, 285 tons; lead, 11 tons; coal, 757,493 tons; gypsum, 107,506 tons; freestone, 9343 tons; limestone, 6726 tons; barytes, 23 tons; moulding sand, 160 tons. Comparing this summary with the preceding year its general appearance is not unfavourable. Of the accidents reported six were attended by fatal results, by explosions of gas six persons were burned, by powder three others were injured, and by an explosion of a steam-boiler three were killed. By other means fourteen persons were known to have been either killed or severely wounded during the past year. Seven out of the eight lives lost by the six fatalities were lost in and about collieries, the eighth at a gold mine. Various valuable and interesting statistical tables are appended to the report.

METALLIFEROUS MINES REGULATION ACT, 1872.—The Right Hon. Richard Assheton Cross, one of Her Majesty's Principal Secretaries of State, in pursuance of section 15 of the Metalliferous Mines Regulation Act, 1872, has appointed the undermentioned Inspectors and Assistant Inspectors of Coal Mines to act as Inspectors of Metalliferous Mines:—Inspectors: Joseph Dickinson, Thomas Wynne, William Alexander, Thomas Evans, James Phillip Baker, Ralph Moore, Thomas Errington Wales, Frank Newby Wardell, James Willis, Thomas Bell, Henry Hall, and Thomas Cadman, Esqs.—Assistant Inspectors: William Galloway, John Boland Atkinson, William Nicholas Atkinson, William Beattie Scott, Joseph Samuel Martin, Joseph Thomas Robson, John Gerrard, John Laidler Hedley, Arthur Henry Stokes, Samuel Bertram Gilroy, John Martine Ronaldson, and Richard Donald Bain, Esqs.

EXTRAORDINARY PRODUCTION OF STEEL.—The Barrow Hematite Iron and Steel Company during the past week at a trial as to the productive power of the mills, succeeded in producing the following extraordinary tonnage in 24 hours:—Three Bessemer converters produced ingots weighing 480 tons; a cogging mill yielded 465 tons; and a rail mill produced 340 tons of Grand Trunk of Canada rails. This output is probably without a parallel.

QUARRYING.—As a quarry exploit the accomplishment of 12 men in Wemyss Bay Quarry is perhaps unequalled. In two hours time, by the aid of wedges alone, they cut out a block of stone 20 ft. square, containing 9680 cubic feet of stone, and weighing 744 tons.

HEAVY MINING MACHINERY.—Some new pumping machinery of large size has recently been completed for the Yellow Jacket Mine, on the Comstock, by Messrs. Prescott, Scott, and Co., of the Union Ironworks, San Francisco. The Mining and Scientific Press observes that an idea of its magnitude will be best conveyed in the statement that the engines, pumps, boilers, &c., weigh, in the aggregate, upwards of 1200 tons, and these large ironworks, employing about 500 men, have been nearly five months engaged on the job. the expense being upwards of $300,000. The engine, air pump, &c., was all set up in the shops this week, and numbers of persons availed themselves of the opportunity of examining its massive proportions. It is now being taken apart and shipped to its destination. A special car had to be constructed to take portions of the machinery which were too heavy for the ordinary flat cars. The engine combines all the modern improvements in engineering, so as to get a direct motion from the engine to the pumps, and have a rotating motion for all the steam valves. To accomplish this the plans carried out were designed by Col. J. G. Fair, Superintendent of the "bonanza" mines; W. H. Patton, Assistant Superintendent and Constructing Engineer; T. G. Taylor, Superintendent of the Yellow Jacket Mine; J. G. West, Chief Engineer of the same mine, and Irving M. Scott, one of the proprietors and General Superintendent of the Union Ironworks. The detailed drawings were worked out by Mr. Eugene O'Neill, Chief Draughtsman of the Union Works. The result so far reflects credit on all concerned, as well as to the foundry interests of the city. The quality and style of machinery speaks for itself in terms complimentary to the projectors and constructors. The foundations for this heavy machinery are already being laid, and will shortly be completed. They are made of solid masonry work, 30 ft. in depth. The anchor rods and bolts, to pass through the bed frames, are 26 ft. long and built into the masonry. The new shaft of the Yellow Jacket Mine, on the Comstock, on which this machinery is to be placed, is now down about 1300 ft., and will be sunk to at least 2300 ft. The main east drift on the 2200 ft. level of the mine is directly under the line of the new shaft, so that they will raise from that level to expedite matters. When the connection is completed all the water from the mine will be raised through this shaft. The cost of this new shaft, including the machinery described, is estimated at $1,600,000. This includes all the pumping engines and fixtures, hoisting engines and equipment, compressor and fixtures, hoisting rig for the new pump shaft, &c. The whole is the finest piece of work ever built on this coast, being in Col. Fair's best style. The machinery is of a capacity sufficient to work the shaft to a depth of 3000 ft.

Died, at Toronto, Canada, on March 8, of Pleurisy, Mr. ALEXANDER HEATHERINGTON, of Halifax, Nova Scotia—for some time a valued correspondent ("Acadiensis") of the *Mining Journal* upon matters relating to the mines and mineral industries of the Dominion, and well known as the author of the gold mining statistics adopted by the Provincial Government. His death will be regretted by a large number of friends.

MINE TABLES.—One of the most comprehensive series of tables of the kind yet published for the use of collieries has just been issued by Messrs. J. G. Campbell and Co., of Sunderland—Mine Tables, showing the number of tons contained in any number of scores and tubs, by Mr. J. H. Miller, mine survey of South Hetton. Each table extends from 1 tub to 20,000 scores, and there are tables for all weights of the tub from 1 lb. to 13 cwts., so that short weight can be as readily calculated and deducted as the weight of the tubs themselves. There is also a table for converting Tyne scores into Wear scores. The amount of time that will be saved by the use of the tables will be enormous, and as the price is very low it is not surprising that the work is already in good demand. A large number have, it is stated, been ordered for the Earl of Durham's collieries, and many copies were bespoken before the book was ready. The preparation of the tables must have involved a large amount of labour, but this is well compensated for in the result obtained.

IMPROVED DYNAMITE.—The invention of Mr. JOHN STENHOUSE of Rodney-street, Pentonville, consists in employing carbonate of ammonia in the said manufacture, and more particularly as an ingredient of the final compound or product. In practically carrying out the invention according to a preferable modification he takes from one to three parts by weight of carborate of ammonia, which may be the ordinary commercial carbonate, for every hundred parts of the nitroglycerine employed, and he mixes the carbonate of ammonia with the kieselguhr or other ingredients prior to the combination of the nitroglycerine therewith. The mixture may be effected in any convenient way, and it may be made sufficiently intimate by mixing the ingredients in a finely powdred state by hand, or by rubbing or passing them through a sieve. The nitroglycerine may be combined in the ordinary manner with the kieselguhr or other ingredients, but before effecting such combination, and after the nitroglycerine has been purified in the ordinary way—which is done by first washing it with water, and after that with solutions of carbonate of potash or of soda—he prefers to give it an additional washing with a solution of carbonate of ammonia; he finds that a solution containing five parts per centum of carbonate of ammonia answers for this purpose, but he does not restrict himself to that strength of solution. One object of employing the car-

bonate of ammonia is to act beneficially on impurities if any accompany the nitro-glycerine employed, and insure perfect and permanent freedom from acidity in the explosive compounds. The included carbonate of ammonia has also the advantage of slightly increasing the explosive force of the compounds. For any of the purposes thus indicated other proportions of carbonate of ammonia besides that hereinbefore stated may be employed when thought desirable.

REPORT FROM CORNWALL.

April 4.—There is nothing that need cause any surprise at the fact that in the face of a falling off in the supply of tin from the colonies, and a substantial reduction in stocks at home, there should have been another fall in the tin standards, which places us precisely in the same position that we were before the recent rise. The market is now acted upon more by external than internal influences, and in the presence of an event of such political importance as the resignation of Lord Derby it is hopeless to expect that any matter of general business shall remain unaffected.

We can hardly recollect a duller week than that through which we have just passed. What little attention there is is rather absorbed by the aspect of our relations with Eastern affairs, though even in that respect there is likewise a singular apathy. So far as one can dissect the permanent interests of Cornish mining from their temporary relations we should be inclined to say that there is a decidedly improved prospect. On the other hand, it is impossible to say that there is other than a very depressed present. Whenever the present disturbing influences are removed there will in all probability be a very sudden rebound, and while that removal may be considerably delayed it may, on the contrary, come at any moment. Whatever may be the case with speculators and jobbers we regard its present position of affairs as anything but unfavourable to those who are inclined to treat mining as a more direct investment, and who are able and content to wait. There are few mines of any standing that are not about meeting costs, or a little more, nor is it at all probable that dividends will altogether disappear from the horizon, while the current—and, as we believe, accidental—prices of these mines are very far indeed below their actual value.

In reference to the important decision in the Stannary Court the other day with regard to the contributories to Ambrose Lake Mine, to which allusion was made in this report, we observe that notice of appeal has been given. This will be heard before the Lords Justices. The case certainly is a very hard one, and the amount of personal liability involved enormous, in one case reaching to 12,000*l.* or 14,000*l.*

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

April 3.—The case of the Llangollen Highway Board against Savin, in the matter of the traction-engines, came before Mr. Justice Mellor and a jury, at the Denbighshire Assizes, held at Ruthin on Wednesday. It ended, at the suggestion of the Judge, after much obstinate resistance on the part of the plaintiffs, whose conduct the Judge rather strongly commented on, in being referred, as far as the facts of the case are concerned, to Mr. Coxon, barrister, who will state a case for the decision of the Court of Queen's Bench. The decision of the Court of Queen's Bench will be awaited with great anxiety by all interested in the use of traction-engines. An adverse judgment must drive them off the roads altogether, for it was admitted on all hands that the engines now in dispute were as perfectly constructed as possible. One witness swore the ruts were 14 in. deep, but on cross-examination admitted he did not know that the bottom of the fire-box was only 8 in. off the ground.

Coal is being stacked at the Plaskynaston Colliery, and a good deal of slack is being accumulated at Wynnstay Colliery, otherwise a good trade is being done, at low rates, in coal. In Flintshire, at the collieries along the estuary of the Dee, the sidings are full of trucks waiting to be loaded. A correspondent of a Liverpool paper suggests a scheme for the improvement of the navigation of this estuary, by which many thousand acres of land may be reclaimed and the main channel of the river deepened up to the City of Chester. There is certainly a good deal to be done in this direction to the benefit of the collieries, smelthouse, foundries, and chemical works that line the banks of the river, and also for local agriculture. But the question remains—Who is to do it? At the Chester Assizes, on Monday, Mr. William Griffith, the former owner of the Cornwall Slate Quarry, near Carnarvon, brought an action against Mr. Henderson, a London engineer, to recover 10,000*l.*, the amount of the price the latter agreed to pay for the quarry. The defendant did not appear, and the Judge gave a verdict for the plaintiff. No further complaints are being heard with respect to the slate trade, and with the opening of northern navigation shortly it is probable that the trade will be as brisk as ever. The men at the Dendraeth Paving Sett Quarries, near Portmadoc, have struck against a reduction of 6d. per day mentioned last. Some of the sett quarries in the same district are now unfortunately idle owing, it is said, to legal difficulties.

I notice a correspondence in the Journal concerning the South de Eresby Mine, the gist of which seems to turn upon the question, will a yield of 1 ton of lead ore per fathom pay not only for working, but also a fair interest on the purchase-money of a mine? It would be interesting to readers if those who say it will would give an illustration or two. In ordinary times the amount should pay for economic working, and with the number of mines in which, judging by the weekly reports, this amount is the average one, the efforts of practical mining men should be directed to the attainment of this result; only in fairness to them they must not be saddled with the usual amount of dead unproductive capital, which with outside costs of management choke up so many mines.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

April 4.—During the week an extraordinary meeting of the Crown Preserved Coal Company, who have works near Cardiff, has been held at Liverpool. There was a discussion as to removing the management of the company from Liverpool to Cardiff, but the idea did not meet with general approval, and was, therefore, abandoned. Mr. G. H. Loxdale presided, and urged the necessity of raising additional capital, which was required for carrying on the works. The issue of mortgage debentures for 7500*l.*, at a rate of not more than 7½ per cent. interest, was agreed upon, and this was the most important business before the meeting. The Tharsis Sulphur and Copper Company directors have resolved to recommend a dividend at the rate of 17½ per cent. for the year 1877. The continued serious illness of Mr. Robert Crawshay, of Cyfartha, is causing much alarm among his friends. On Wednesday he was thought to be a little better.

The scheme for connecting Newport with the Rhondda Valley, which the Pontypridd, Caerphilly, and Newport Railway Bill shadows forth, is being warmly supported. An influentially attended public meeting has been held at the Town Hall, Newport, when a petition in favour of the Bill was unanimously passed. Mr. J. C. Parkinson, the managing director of the Alexandra Dock Company, was the principal speaker, and he urged the claims of the project strongly. Other public bodies have adopted a similar course. The main opposition to be apprehended is on the part of the Taff Vale Railway Company. By-the-bye, some of the speakers at the meeting referred to made capital out of the alleged obstruction of the Cefn-y-Wrach shoal at Cardiff. I see another pilot has been suspended for refusing to take a vessel through the Channel from the Bute Docks.

The new general manager of the works and collieries of the Llynvi, Tondu, and Ogmore Company is Mr. William Blakemore, mining engineer, of Wolverhampton.

The steel trade is making progress in this district, as has already been stated. Assuredly South Wales has great facilities for carrying on this industry. She has a good native ore, is exceptionally placed in regard to get ore from Spain, and can produce coal which makes the finest coke. Labour is also cheap, and on a general improvement in trade she must share largely in the ensuing prosperity. There appears to be a slight move in the demand for best descriptions of steel and iron; it is unsatisfactory to note, however, that notices to terminate contracts have been posted at Dowlais. These will not affect those employed at the collieries. The iron trade generally exhibits no improvement. The rail department is very dull, and appears likely to remain so; bars are also in limited request. Clearances during the week have not been very extensive, but, for a wonder, they include a parcel to Antwerp. Pig-iron is materially unchanged. The tin-plate trade, also, cannot be said to have undergone any alteration of importance. Prices are low and uncertain, but about the average amount of work is doing. There is perhaps a little more activity in the coal trade this week, although at some few of the pits there does not seem to be quite so much doing. The demand for steam coal has been fairly maintained, and prices have been firm, but without change. Freights, too, are firmer, especially in the direction of the Mediterranean. The coal industry is still dull and inactive; but there is more animation apparent in the patent fuel department, and certainly not before it is needed. Shipments have been above the average.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

April 4.—Business is seriously interfered with by the apprehension in which the nation is kept as to whether the Government are really determined upon rushing into war. Confidence is prevented from returning to trade, and makers and consumers are alike unprepared to enter into lengthy or large contracts. The business that is being done is mostly to satisfy existing needs. Nevertheless there are a few finished iron firms who have some considerable orders on their books. In this connection the Osier Bed Iron Company, Wolverhampton, are conspicuous. But the orders, as a class, have been placed principally by merchants at a distance, and the figure is low. Messrs. Morewood and Co., galvanisers and the like, have started a sheet-making establishment, which they have recently erected at Smethwick. Production in the pig-iron trade is increasing, but the demand is scarcely equal to the augmented make. Furnace and forge coal is in no less sale than a week ago; competition from new concerns keeps down prices.

On the estate of the Earl of Derby, adjacent to his Himley Collieries, at Lower Gornal, what is reported to be the famous 10-yard Thick coal seam has been struck at a depth of only 60 yards. it is understood that the seam extends over 200 acres, and that mining operations will be commenced at no very distant date. The find is a surprise, as it had been thought that in consequence of the nearness of the Silurian deposit no valuable minerals were contained in the neighbourhood. Thirty years ago a round sum of money was fruitlessly spent in mining experiments near the same locality.

The annual report of the Chillington Iron Company (Limited), Wolverhampton, shows a loss of 970*l.* Last year there was a loss of some 8000*l.* The directors say that the depression in trade has increased, but consider that the present prospects are more encouraging. The selling price of the company's iron during the year has averaged 18s. 7d. per ton less than in 1876.

At a monthly meeting of the Mines Drainage Commissioners in Wolverhampton, on Wednesday, it was resolved that, in accordance with the Act, every occupier of a mine within the drainage area should be required to make a return showing the acreage of his mines during 1877, and also the tons of minerals raised. At the same meeting it was announced that the new Bill of the Commissioners was likely to become law soon after the Easter recess; the opposition of the Bilston district had been withdrawn, and the measure when passed would be but little different from its original form.

The Sandwell Park Colliery Company's shares continue to exhibit an upward tendency. Since my last they have gained 7s. 6d. in value, and 13¾ is now the figure of transactions.

A better organisation among the miners in the Lye district, near Stourbridge, is being agitated by the Union officials thereabouts, and resolutions supporting Mr. Macdonald's Bill for increased protection for the miner have been passed at meetings called for the purpose.

There is little alteration in the North Staffordshire Coal and Iron Trades. Business is depressed. No change is expected in prices at the quarterly meeting.

It is now ascertained that the total number of deaths due to the explosion at the Burley pit, Apedale, is 23. The mine has been flooded to extinguish the fire, which was greatly spreading. It is expected that a long time will elapse before the bodies in the pit can be recovered. In the meantime, all the pits connected with the Burley Mine are closed, and several hundred men are out of work.

NORTH STAFFORDSHIRE IRON AND COAL MASTRS' ASSOCIATION.—The quarterly meeting of this association was held on Thursday at Hanley, Mr. Wragge in the chair. It was stated that the trade of the district in every department was in a very quiet condition although there had been some improvement during the last few weeks in the demand for finished iron. The opening of the shipping season did not as yet promise to give its usual stimulus to the trade. The business doing in pig-iron was reported to be inactive, but there were enquiries which might lead to sales at the Birmingham meeting next week. No alteration was made in prices, either of finished iron or pig-iron. Although the output of coal was limited, most of the pits working short time, there was abundance of that material, owing to the smallness of the demand. The get of ironstone has been much reduced, but owing to the number of furnaces out of blast the supply is in excess of the requirements, and there are heavy stocks in hand.

Mr. WM. BLAKEMORE, mining engineer, Wolverhampton, has been appointed general manager of the extensive ironworks and collieries of the Llynvi, Tondu, and Ogmore Company, in Glamorganshire, South Wales. Mr. Blakemore has for many years, in addition to being largely interested in the coal and iron trades of this and other districts, including an extensive practice in South Wales, given much time and attention to the mineral resources of South Staffordshire and East Worcestershire, the result of which he has on many occasions laid before the Dudley Mining Institute and kindred societies. A year or two ago he was President of the Dudley Institute, and has been secretary to the Mines Examination Board for this district since its formation. He is also a Fellow of the Geological Society, and is connected with a number of other scientific institution in the kingdom. Locally he has given much of his time and the benefit of his experience in discharging duties he had undertaken in connection with the Board of Guardians, Wednesfield School Board, and Heath Town Local Board, Mr. Blakemore will carry with him to his new sphere of labour the esteem and goodwill of a very wide circle of friends.

—*Wolverhampton Chronicle.*

TRADE OF THE TYNE AND WEAR.

April 4.—There has been a good demand for shipping during the week, and freights have improved a little; some improvement is also to be observed in some branches of trade, but, on the whole, there is an entire absence of spirit and speculation, caused by the unsettled state of affairs in the East and the constant dread of war breaking out. There is a slight change to notice in the state of the steam coal trade in Northumberland; the works are only kept going as ships demand cargoes, there being very little inclination to make stocks in the present state of trade. In Durham the demand for gas coal continues fair, and best household coal has improved, but for coke and other coals the demand is deficient. The notices served on the miners at Eldon Collieries, near Shildon, expired on Saturday, and the works are closed: 800 men and boys were employed here. The proposed closing of East Howle Collieries has been avolded, the men having accepted a reduction. Mr. T. W. Bunning has been instructed by the Durham Coalowners' Association to communicate with Mr. Crawford and the executive of the Miners' Union the intention of the coalowners of seeking for an increase of the hours of working from 10 to 11 hours per day. The men at South Durham Colliery terminated their engagements on Friday, and work is now suspended; about 600 men and boys were employed here. The long and severe depression has done its work in this district, and the law of supply and demand has at length, in spite of all the exertions of the Union leaders, come into full play. We now hear little of the action of the Union; disputes are not in all cases settled by the mine agents, or appeals to the joint committees sitting at the Coal Trade Office in Newcastle. When it is found that a work cannot be carried on at a profit notice is given to the men, and if they agree to a sufficient reduction the works are restarted, if not they are closed for an indefinite period. It is evident that the Union is on the wane, and there are now a large number of men in the mines who have no connection with it; at many of the works only about half the number of men employed are members of the Union.

The new phase of the Eastern Question has had an unfavourable effect on trade, and the business done in pig-iron has been limited, but, independently of this cause, it is estimated that makers sold within a fortnight previously about a quarter of a million tons, and therefore they are not anxious to press sales at present except on favourable terms, and as ten furnaces have been blown out of late, and three others are to be blown out, makers are pretty firm at present. A largely decreased make may be expected next month. All the blast-furnace men have accepted the reduction. The arbitration in the manufactured iron trade wages question is expected to come off next week, Mr. Dale having consented to be arbitrator. The ship-plate trade is scarcely so brisk; angles in fair demand at 5*l.* 17s. 6d.

Hopes are expressed that the manufacture of steel in this district will assist to bring back prosperity, the steel trade being very brisk at present, and this use of steel instead of iron is constantly being extended. One steel ship has been completed on the Tyne, and three are building at present on the Clyde. At Consett and at most of the large ironworks here it is evident that attention must be turned to the manufacture of steel plates, steel rails, &c. The chemical market has been somewhat quieter during the week, but prices are still tolerably firm. The unsettled feeling produced by Eastern affairs is keeping back business, which would otherwise improve in every respect. A few sales have been made during the past few days at slightly increased rates for forward delivery.

Complaints are still made of the charges made by the North-Eastern Railway Company for mineral rates. The company's charges are in excess of those of 1871, and this cannot be considered fair, looking at the wretched state of the coal and iron trades, and the low prices realised for all the produce of the mines and quarries in the district.

The annual statement of the Tharsis Copper Company, at Jarrow, has been published, from which it appears that a dividend of 17½ per cent. is to be declared.

The monthly meeting of the North of England Institute of Mining and Mechanical Engineers, which was intended to be held on the 6th inst., is postponed until next Saturday, when a paper will be read by the secretary on "The Northern Coal Fields of France," it being considered of importance that this paper should be in the hands of members before the visit to the said coal fields.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

April 4.—No change of late has taken place in the business doing in the lead districts or with respect to the quantity of ore raised, which has been kept up to the average. A considerable tonnage of ironstone continues to be imported from Northamptonshire, from which there is a very fair rate over the Midland, so that so much attention is not paid to the local stone as was formerly the case. At Staveley, Sheepbridge, and other places the production of pig goes on as usual, but there has been no material improvement in the demand or the home consumption. Most of the foundries are fairly off for work, but the number of hands now employed at most of the works is less than formerly. At Dronfield there is still considerable activity at the Bessemer works in the rolling of rails, and there is every appearance that this state of things will continue, for companies both at home and abroad are now using Bessemer rails only, seeing they can be purchased at such a low price as 6*l.* 10s. per ton. The wages question in North Derbyshire having been amicably arranged in most instances between colliery owners and their workmen, matters are going along smoothly, although short time still prevails, and is likely to, seeing that too many collieries have been opened out during the last two or three years to admit of all of them being kept profitably at work. To London the tonnage of the best qualities of coal has been well maintained for the season, but a falling off is now looked forward to, as well as even lower prices, although at present they are the opposite of remunerative.

In Sheffield trade is now far better than it has been since the commencement of the year, although there is still a considerable number of men either entirely out of work or only partially employed. The mills are running better in both plates and sheets, and heavy plates have been turned out rather extensively. In combined plates of steel and iron experiments are being made, and there is every reason to believe that some will be produced exhibiting far greater resisting power than those made of iron only. In cast steel there has been a little improvement in the demand of late for special qualities, but there is not that amount of business doing to keep the works going to their full extent. Some of the cutlery houses are working fairly in the best qualities of table-knives, but secondary qualities, as well as pen and pocket knives, are still in but moderate request. Boiler makers are kept moderately well going, and Messrs. Hawksley, Wild, and Co. are pushing forward their well-known patent specialities, which include, in addition to their well-known flanged-flued and sectional high-pressure boilers, feed-water heaters, dead-weight, safety-valves, and steam engine pistons. The foundries are fairly employed, especially in light castings, and there is a decided improvement at most of the works outside the town as well as inside. The Bessemer works are very busy, and the quantity of rails being turned out far exceeds that of former years, and low as the prices are it is evident that a fair profit is being made. At Penistone they are now making at the rate of 1200 tons of rails weekly, besides turning out a fair quantity of forgings. Mr. G. Dawes, of the Elsecar and Milton Works, has five furnaces in blast, and is about to put up a sixth, consuming a good deal of what he produces on the spot. He is now executing a Government order for 2000 tons of plates, which are sent to Goole for shipment to their destination. At the Railway Foundry, Barnsley, they are still engaged on patent metallic pistons, for which the firm is noted, and on Wednesday Fenton's patent steel wheels were exhibited in the yard in the presence of a number of mining engineers. The coal trade of South Yorkshire has undergone but little change during the week, most of the pits doing about four days a week. Some seams of coal have been altogether abandoned for the present, as they could not be worked unless at a serious loss. Silkstones have been in most request, and they can be purchased at from 9s. to 9s. 6d. per ton. To London the business has kept up tolerably well so far as regards households, but there has been no improvement with respect to steam qualities, which are being extensively stacked.

A meeting of the Midland Institute of Mining, Civil, and Mechanical Engineers was held at the Queen's Hotel, Barnsley, on Wednesday, under the presidency of Mr. T. W. Embleton (Methley), the President. The further discussion on Mr. J. C. Jefferson's paper on "Deep Boring, as Practised on the Continent," was adjourned. The President read a paper on a new method of tubbing without wedging; and Mr. M. Fenton, of Sheffield, gave a description of implements in the manufacture of steel cog wheels, and afterwards conducted a series of experiments with such wheels at Messrs. Qualter Hall and Co.'s foundry.

On Wednesday the Willow Bank Colliery, near Barnsley, was set down, as it could not be worked so as to yield any profit to the company. The Bloomhouse Colliery, in the same locality, has also been stopped for a similar reason. At Dodworth Silkstone all the old hands are now on strike, but the company has obtained a number of miners from Staffordshire to occupy their places, and it is said do not intend again employing any of those who have struck. The dispute at the Manvers Main Colliery it is expected will now be brought to a close by Mr. Mundella, M.P., who has accepted the position of referee. He has arranged to take the required evidence on the part of both masters and workmen at the Westminster Palace Hotel on Monday next. Mr. Thompson, the manager, will represent the company, and the men by the officials of the Miners' Association. On Wednesday at the Barnsley Town Hall a man named Monks was fined 40s. and costs for having taken matches down the

Tankersley Colliery. When men act so recklessly as Monks did, surely it is no wonder that explosions take place in collieries, the cause of which cannot be clearly traced.

WATSON BROTHERS' MINING CIRCULAR.

Ten years ago the weekly information which had previously been published for a great number of years in WATSON BROTHERS' Mining Circular was transferred to the columns of the *Mining Journal*, with the following announcement; which is now reproduced in consequence of the numerous letters and enquiries handed to them of late in reply to one which appeared in the Journal on the Clementina Mine.

WATSON BROTHERS,
MINEOWNERS, STOCK AND SHARE DEALERS, &c.,
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

D'ERESBY CONSOLS.—The last miner who worked on Owen's lode in this mine tells our agent that he worked on it for four years; it used to take him with his three mates till 10 o'clock every morning to haul out the water accumulated during the night, till at last they were drowned out altogether, leaving, as he states, a splendid lode in the bottom of the shaft. In one "take" of two months he and his three mates raised in this inconvenient fashion, and dressed by hand, 14 tons of lead. To get under this shaft and unwater it the adit level has to be driven about 7 fathoms. To cut the great Cobbler's lode, which yielded such large returns of lead shallow, this adit will have to be driven 32 fathoms.

ABERLLYN.—This sett adjoins D'Eresby Consols, has the whole of the great Gorse lode, enormous water power, and could at once be worked to a profit from a lode said to be nearly 8 feet of solid blende. It is at present in private hands. We hope ere long to visit the district, and give our impression of all the mines in a few short notes, with a map to show the relative position of each sett, and will reserve till then noticing the other points of our correspondent.

D'ERESBY MOUNTAIN.—We understand some dissatisfaction has been expressed on the market that these shares were not subdivided at the meeting. The holders of the majority of shares, however, were opposed to it, as they hold for investment, without reference to the market price. Since the meeting we have received several letters from shareholders who were not present, expressing their satisfaction that the shares were to be kept in 512ths. We are aware that with such a small number of shares, and held as they are by very few persons not desirous of selling, it is difficult to deal to gamble with them on the market, and the price will always be more or less a matter for negociation, but this cannot be helped. One correspondent writes us that a syndicate had been proposed to "bear" the shares—the party acting with the syndicate would offer and sell shares not possessing them; get down the quotations if possible, and then frighten the shareholders into the market. Years ago this was a popular as well as a profitable game, but it would be too dangerous to be attempted with a mine in 512 shares only, though our correspondent offers to send us names and all particulars of the proposed movement. Let the shareholders rely, and this is the only caution we shall give—upon the agents' reports, and remember that very shortly now we may see a discovery in No. 5 adit which may double the value of the property. Of course this is a speculation, but if any of our friends or shareholders are desirous of selling, or anyone else of "bearing," we are ready to buy.

SATURDAY, MARCH 30.—The chief demand to-day has been for D'Eresby Mountain, and shares advanced to 80/, buyers. Great Laxey and Van shares weaker. D'Eresby Mountain, 80 to 100; Great Laxey, 18 to 20; Van, 23 to 25; West Chiverton, 13 to 14; D'Eresby Consols, 10 to 12½; Roman Gravels, 8¾ to 8¾; East Van, 4 to 4¼; Tankerville, 3½ to 4; Rookhope Lead, 17s. to 19s.; Grogwinion, 3½ to 4; South Condurrow, 11 to 11¼; Tincroft, 11¼ to 12¼; Carn Brea, 42½ to 43; Dolcoath, 31 to 33; West Tolgus, 70 to 72; Parys Mountain, 8s. to 10s.

MONDAY, APRIL 1.—The demand for D'Eresby Mountain and D'Eresby Consols shares continues at advanced prices. D'Eresby Mountain, 85 to 95; D'Eresby Consols, 11 to 13; Great Laxey, 19 to 20; Van, 23 to 25; Roman Gravels, 8¼ to 8¾; West Chiverton, 13 to 14; Leadhills, 3½ to 3¾; Rookhope Lead, 17s. to 19s.; Grogwinion, 3½ to 4; West Wye Valley, 3¼ to 3½; South Condurrow, 11 to 11½; Tincroft, 11¼ to 12¼; Dolcoath, 31 to 33; Carn Brea, 42½ to 43; Agar, 4 to 4½; Grenville, 3 to 3¼; Peevor, 6 to 6½; Richmond, 9¼ to 9¼; Eberhardt, 5¼ to 5¾.

TUESDAY, APRIL 2.—Market moderately active for shares in lead mines, and prices generally firm at quotations. Tin shares weaker. D'Eresby Mountain, 85 to 95; D'Eresby Consols, 12 to 14; Van, 23 to 25; Great Laxey, 19 to 20; East Van, 4 to 4¼; Roman Gravels, 8¾ to 8¾; Tankerville, 3½ to 4¼; Rookhope Lead, 17s. to 19s.; Grogwinion, 3½ to 4; West Chiverton, 13 to 14; Leadhills, 3¾ to 3¾; West Pateley Bridge, 1¾ to 2¼; Wye Valley, 1¾ to 2¼; West Wye Valley, 3¼ to 3¾; Carn Brea, 41 to 43; Dolcoath, 30 to 32; South Condurrow, 11 to 11½; Tincroft, 11 to 12; Wheal Agar, 3¼ to 4¼; Grenville, 2¼ to 3¼; West Tolgus, 70 to 72½; Parys Mountain, 8s. to 10s.; Devon Great Consols, 2¾ to 3; Richmond, 9¼ to 10; Eberhardt, 5¼ to 5¾; Chontales, 11s. to 13s.

WEDNESDAY, APRIL 3.—Market for tin shares flatter. D'Eresby Mountain and D'Eresby Consols shares in demand. Carn Brea, 40 to 42½; South Condurrow, 10¼ to 11; Agar, 3¾ to 4; Grenville, 2½ to 3; Dolcoath, 30 to 32; D'Eresby Mountain, 85 to 95; D'Eresby Consols, 12 to 14; Van, 23 to 25; West Chiverton, 13 to 14; East Van, 4¼ to 4¾; Great Laxey, 19 to 20; Tankerville, 3¾ to 4; Roman Gravels, 8 to 8¼; Grogwinion, 3½ to 4; Rookhope Lead, 17s. to 19s.; Leadhills, 3¾ to 3¾; Richmond, 9¼ to 10; Eberhardt, 5¼ to 5¾.

THURSDAY, APRIL 4.—Market for tin shares very quiet. Tankerville, D'Eresby Mountain, and D'Eresby Consols firm at quotations. Carn Brea, 40 to 40½; Dolcoath, 30 to 32; D'Eresby Mountain, 85 to 95; D'Eresby Consols, 12 to 14; East Van, 4¼ to 4¾; Devon Great Consols, 30 to 32; Grogwinion, 3½ to 4; Great Laxey, 19 to 20; Leadhills, 3¾ to 3¾; Parys Mountain, 9s. to 11s.; Roman Gravels, 8 to 8½; Rookhope, 17s. to 19s.; South Condurrow, 10½ to 11; Tankerville, 3¾ to 4; Tincroft, 11 to 12; Van, 21 to 23; West Chiverton, 13 to 14; West Pateley Bridge, 1¾ to 2¾; West Tolgus, 70 to 72; Agar, 3½ to 4; Grenville, 2½ to 3; Peevor, 6 to 6½; Richmond, 9¼ to 10; Eberhardt, 5¼ to 5¾; Chontales, 11s. to 13s.; Flagstaff, 12s. 6d. to 15s.; New Quebrada, 1¾ to 1¾; Pestarena, 5s. to 7s.

FRIDAY, APRIL 5.—The demand to-day has been for Van, East Van, D'Eresby Mountain, and D'Eresby Consols lead shares. Tin shares also firm. Van, 21½ to 23¾; East Van, 5¼ to 6; D'Eresby Mountain, 85 to 95; D'Eresby Consols, 12 to 14; Rookhope (Lead), 17s. 6d. to 20s.; Roman Gravels, 8 to 8¼; Tankerville, 3¾ to 4¼; West Chiverton, 13 to 14; Leadhills, 3¾ to 3¾; Carn Brea, 42½ to 43; Dolcoath, 31 to 33; South Condurrow, 10½ to 11; Tincroft, 11 to 12; Agar, 3¾ to 4¼; Grenville, 2¾ to 3¾; Peevor, 6¼ to 6¾.

FOREIGN MINES.

WEST PRUSSIAN MINING COMPANY.—The directors have declared the usual quarterly dividend on the preference shares, at the rate of 8 per cent. per annum. Although sufficient profits have been earned during the past quarter to meet the usual interim dividend on the A shares, the directors think it more prudent, in view of the continued decline in the market value of mineral produce, and the uncertainty of commercial prospects, to withhold this payment.

ST. JOHN DEL REY.—Telegram from Morro Velho, dated Rio de Janeiro, March 29: Produce eleven days, second division of March, 14,000 oits.=5425*l.*; yield, 6·1 oits. per ton = 7·6 oits. by old measurement.

RICHMOND CONSOLIDATED.—Telegram from the mine at Eureka, Nevada: Week's run, $100,000, from 1130 tons of ore; week's produce of refinery, $50,000.

— R. Rickard, March 14: During the past week operations both in mine and works have been carried on without interruption, and with very good results. The 200 main drift has been extended to the quartzite; the contact is close without ore. The stope over this level is without change. The 400 main drift is looking very well; the end is all in ore. Not much work has been done in exploring this ore body during the past week, the men having been occupied in putting in timber. The ore body in the 400 cross-cut is developing very well; the size of the ore body is 70 ft. by 40 ft., with ore in both ends of working. We have also raised 30 ft., and sunk 20 ft. in very good ore. The stopes above the 400 are opening out well, especially Nos. 4 and 5 chambers. There is no change in any other portion of the mine since last reported. The furnaces are working well, and turning out usual amount of bullion.

GOLD RUN.—Telegram: We have cleaned up after a run of 23 days. The total produce amounts to $5250.

TOLIMA.—Frias: The January returns show a profit of 181*l.* 10s. 4d. The general manager observes—"The Frias Mine shows every sign of continuing in a good productive condition, and the Alto Mine is giving very favourable results in the native working."

EBERHARDT AND AURORA.—Extract from Captain Drake's letter, dated March 12:—Enclosed please find my weekly report for mines and tunnel for week ending March 9. No material change since last reported. We are still obtaining sufficient ore from the chamber that will pay the expense of extracting and working the same. Face of tunnel still in ledge matter, and a better working ground than was encountered a week ago. The up-raise from the tunnel drift (John Wild North) continues in quartz, showing favourably for an improvement. Work at all points is progressing well.

MALABAR.—G. B. O'Reilly, Feb. 18: The Mine: Since effecting the change of our distributor and monitors to a point further to the south, and placing them in a safe position, the work has proceeded quite satisfactorily, and we are now able to run frequently during the night. Up to date we have 360 hours, and shall probably conclude 700 or 800 hours before clearing up our sluices, so that by the mail of March 10 or 20 we ought to have a pretty good remittance of gold to forward. I think we can notice a sensible improvement in the character of the gravel, and as we are running off very large quantities there is some hope of a better result in our next clean up, which will be a general one. At the date of writing there is very little to communicate, the work having proceeded with the greatest regularity. The pipe-clay is rather easier to deal with just now, and we keep from 35 to 40 men fully employed. Our water supply is still good, as we have had local showers. I shall continue to push on our explorations further into the bank, and I think I am safe in assuring the board that we can do so without any risk of loss, and there is always some chance of an improvement occuring.

UNITED MEXICAN.—Advices from Mr. Edward Hay, dated Guanaxuato, Feb 22, and received April 1.—Adit of San Cayetano, Mines of San Antonio and San Cayetano de la Ovejera: The lode is now broader than the end of Los Angeles, and we have lost sight of the upper reliz (wall of the lode). The whole width is in veinstuff, but the pintas (appearances) are scarcer than they were when the lode was narrow. The water comes away as abundantly as heretofore, and has the same muddy consistency as last reported. From the shaft of San Cayetano we have taken out two metres of attle (rubbish), and water up to last Saturday, so that on Feb. 16 the clear depth from the mouth of the shaft was 46 metres. The timbering of the soft part is continued, the despacho (platform) opens to the north east, but on account of the softness of the ground, which would necessitate continuous timbering, we have left it as it is to reach as soon as possible the second despacho, that ought to be some 16 or 20 metres lower down according to some miners, who assured me that they have worked there many years ago. This second despatcho is said to be in harder ground, and if so it will give us more facility to enter the old workings, and ventilate them at a lower level without going to the expense of clearing the upper gallery. One end of the rope of the horse-whim is employed on the drainage and the other in raising the attle. In San Antonio some men are employed repairing the timbering in the various parts of the adit.

MALPASO.—W. S. Welton, Feb. 20: Run No. 43, extending from Jan. 18 to Feb. 19, during which washing was carried on for 437½ hours, with an average head of water of 484 in., has produced 90·55 ozs. of gold, valued at $1675·17=335*l.* The cost during the above run is estimated as follows:—Mine (running) cost, $1600·8; new ditch extension, $680; new opening cost, $150—$2430·8=410*l.* This run was made principally upon the bottom dirt from the last two runs, and the gold obtained was in very fine grains. At present the bottom gravel consists of decomposed granite, mixed with gravel, and gives very poor prospects; we appear, however, to be reaching better ground. During the run a bridge, 140 feet long, on the old ditch near the bulkhead, fell down, and as the whole structure was rotten, and sawn timber had just been got ready for its reconstruction for the bringing in the full supply of water, a new bridge was put up in the most permanent manner possible. Almost 7½ days running were lost in repairs to the ditch, but in other respects the run was a fair one in regard of time lost. Cleaning up took more time than ordinary, on account of the bottom gravel being so soft that great care was required to get the cuts clear. I have now a branch sluice near the head of the main sluice, and in future the cuts will be got down and sluice put in whilst running.—New Ditch Extension: This is now in a very forward state, and might be pushed, but I would like if possible to get the new opening more ahead first.—New Opening: This work has become more difficult as we get in, and the sides become high, as the tailings at the sides are continually sliding into the cut. With all our water for about two months a cutting could be made that would require only some boulders and rises in the bed rock to be blasted in order to put in sluice, but then no returns would be got from the mine. During this month I shall attend to this work continually in order to see what can be done to get on more quickly.

HULTAFALL.—W. Perkins, March 30: The dressing machinery runs well, but some time must elapse before we have produce enough from the jiggers to get all the buddles, &c, into full work, and until everything is in full swing it is impossible for me to report actual results. So far everything goes well, and I have reason to believe the directors will be satisfied with the work that has been done.

— H. Bankhart, April 1: During the last fortnight the work has been progressed with most favourably. The shaft is now down 48 ft. below the 90 ft. level. There is still a small thread of orey matter running halfway across the shaft diagonally; sometimes the galena is very massive, and then it turns to blende. The surrounding rock is fluor spar of various hues, but principally green, and before long we shall come upon a fine body of lead I feel convinced, as the matrix is especially kindly for it. The No. 1 level I ceased for a time, being in barren rock, and commenced a cross cut at the side of the footwall to the Alexandra trial; this is in fine ore, and will be distinguished as No. 3 level. I have set four men to continue the cross-cut, and hope soon to say that I have reached the Perkins' lode. I have determined that the Perkins and Alexandra are not one and the same lodes. The No. 2 level is a continuation of the first run from the shaft, and is running with the lode north 35° west; this is nearly all splendid mineral. No. 4 level is in 6 ft., running at present also on the lode north 55° east, nearly parallel with the length of the shaft, and as it seems to open out towards the old silver lode I shall follow the course of the ore a few degrees more to the east. The mineral from roof to floor is very fine; its width, however, varies sometimes, leaving solid ore on both sides of the level, and at others drawing into 4 ft. wide. We have so far opened upon the line of the lode from the footwall over 40 ft. in a continuous run of mineral, with but little break. Roof and floor all ore.

MINERAL HILL.—Mr. Plummer (March 9) writes—Queen Tunnel: Progress during the week 8 ft., and the ground without change.—Star Mine: During the past week we have broken 10 tons at 36s from the vicinity of the Star incline, and a fair body of quartz yet in sight.—Troy Mine: Troy winze deepened 3 fms. 6 ft. this week. The vein still keeps its course and well-defined surroundings, but no ore.—Western Stope: Tunnel extended 10 ft. during the week; some nice pieces of ore have been broken, and we are much encouraged. We think we are getting near ore in appreciable quantities.

PONTGIBAUD.—April 1: Roure Mine: The 175 trip-plat is finished, and the cross cut set to drive towards the lode. The 150 metre level, north and south of cross-cut, on the under portion of the lode, yields orestuff in each end, but of rather coarse quality. The 100 cross-cut east continues in hard ground. The cross-cut in the opposite direction is in favourable ground. The 80 south, on Virginie's lode, yields ⅛ ton of ore per current metre. The 60, in the same direction, is improved, and yields ¾ ton of ore per current metre. The lode where it is being undercut in this level, south of Brugere's winze, yields ¾ ton of ore per current metre. The winze below this point yields ¼ ton of ore per current metre. The 40 north has yielded a little ore during the month, but not of much value. The winze behind this end has been holed to the 60, opening ground worth 1 ton of ore per current metre. The 20, north of cross-cut, on the eastern part of the lode, yields ¾ ton, and the same level south ½ ton of ore per current metre. The adit north, on Virginie's lode, yields from ¾ to ½ ton of ore per current metre. The 40 cross-cut east, from Mill shaft, is in stiff ground, but good progress is being made.—Miocbe: The adit cross-cut east continues in favourable ground. The adit, north of the above cross-cut, is in a soft lode of unkindly appearance.

La Brousse: The 140 cross-cut east towards the new shaft is in favourable ground. The rise from the 120 proceeds favourably, as does the sinking of the shaft from the 60 above this point. The 120 south continues to open good ground—worth ¾ ton of ore per current metre for the width of the end, but a large portion of the lode remains to be undercut. The 100 south yields a little saving work. The 80 in the same direction has opened a good piece of ground worth ¾ ton of ore per current metre, but it is again deranged by a cross-vein. The winze behind this end is unproductive. The 40 has been holed to the workings on the eastern part of the lode, opening some good tribute ground—worth from ⅜ to ½ ton of ore per current metre.—Pranal: The 100, south of St. George's shaft, is in a strong lode, which is letting out much gas and water, and yielding ½ ton of ore per current metre. The same level north is unproductive. The rise in the 90 north is poor. The winze below this level opposite the shaft yields 1 ton of ore per current metre. The 90 south is unproductive. The lode where it is being undercut behind this end yields ¼ ton of ore per current metre. The 90 metre level, north of St. George's shaft, yields ½ ton of ore per current metre. This same level south is poor. The 50 north yields saving work towards the foot of the level. We seem to be driving over the good ground opened in the 70, which does not make much at this level. The winze below the 30 over the 50 end south yields ½ ton of ore per current metre.—Villelongue: We have intersected the lode by a short cross-cut, and are driving southward on its course, but being near the surface cannot judge much as to its value. It presents a strong and regular appearance, but without any indication of lead ore.—Surface: Our dressing has gone on without any serious interruption. The samplings have amounted to 256¾ tons.

GOLD AND SILVER MINING IN WESTERN AMERICA.—The great gold and silver mineral belt extending along the eastern slope of the Rocky Mountains from the British possessions to Mexico is about to be represented by a wealthy organisation. The object will not be to acquire properties for itself as a corporation but to provide means by which mineowners may secure a fair proportion of the product and wealth of the mines when developed—in other words, to bring the buyers and sellers together under such conditions as will be mutually advantageous. Already as a result of the organisation a company has been formed for the erection of reduction works on an extensive scale, the great mass of the mines having proved extremely rich. The organisation has the powerful active support of some of the Far West millionaires, who have appointed Messrs. F. W. Mansell and Co., of Palmerston Buildings, their representatives in England and France. It is understood that negociations are in progress with the view of appointing several leading continental bankers agents of the association.

MINERALS WANTED.

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THE DIFFICULTY experienced by London and other distant Mine Shareholders, in obtaining RELIABLE INFORMATION respecting the state of Devon and Cornish Mines, may be most effectually overcome by corresponding with the undersigned, who from personal inspection and investigation is in a position to give sound advice respecting same.

The advice given will be based upon sound judgment and ability, but at the same time so exceedingly fluctuating is mining that he does not in any way hold himself responsible, or subject to blame, should results not always equal expectations.

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WANTED, by the PATELEY BRIDGE LEAD MINES AND SMELTING COMPANY (LIMITED), a SMELTERS' BELLOWS for LEAD ORE SMELTING PURPOSES.
Any party who may have such for sale will find a ready purchaser by applying to Mr. C. WILLIAMS, at the above Mines, near Pateley Bridge, Yorkshire.

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235 MALABAR GOLD WASHING COMPANY (LIMITED)... £1 each.
150 MALPASO GOLD WASHING COMPANY (LIMITED)... 1 „
350 RICA GOLD WASHING COMPANY (LIMITED) ..... 1 „
Apply to JOHN B. BALL and Co., 1, Gresham Buildings, E.C.

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FOUR MINES CERTAIN FOR A RISE.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
March 30	Grogwinion	150	£10 16 6	Walker, Parker, & Co.
	—South Cwmystwith	40	10 15 0	ditto
	—Hornachos	39 0 2	33 1 3	Nevill, Druce, and Co.
April 4	Van	100	11 7 6	Panther Lead Co.
	— ditto	50	11 12 6	Weston, Son, and Co.
	— ditto	50	11 10 6	ditto
	— ditto	100	11 12 6	Mining Co. of Ireland.
	— ditto	100	11 18 6	Sheldon, Bush, and Co.

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
April 4	Van	100	£ 2 11 6	Vivian and Sons.
	— ditto	50	2 11 6	Dillwyn and Co.
	— ditto	50	2 11 6	Richardson and Co.

PERUVIAN TIN ORE SOLD IN LIVERPOOL.

Date.	Tons.	Price per ton.	Purchasers.
April 3	11	£27 5 0	Thos. Bolitho and Sons.
	8	30 2 6	Williams, Harvey, and Co.
	10½	27 5 0	Daubuz and Co.
	5½	34 10 0	Redruth Company.
	5¼	34 10 0	R. R. Michell and Co.
	5	34 10 0	Charlestown Company.
	5	34 10 0	Calenick Company.

TIN BARILLA SOLD IN LIVERPOOL.

Date.	Tons.	Price per ton.	Purchasers.
March 27	11	£27 5 0	Bolitho & Sons; Calenick Co.
	10½	27 5 0	Daubuz and Co.
	8	30 2 6	Williams, Harvey, & Co.

COPPER ORES.

Sampled March 20, and sold at Tabb's Hotel, Redruth, April 4.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
West Tolgus	77	£5 3 0	East Pool	40	£2 7 0
ditto	73	6 15 6	ditto	19	6 13 6
ditto	65	7 10 0	South Crofty	66	1 19 0
ditto	63	4 8 6	ditto	52	2 2 0
ditto	58	2 16 0	Crinnis & Carlyon	41	4 9 0
ditto	54	6 16 6	ditto	40	4 7 0
Mellanear	78	3 5 6	Carn Brea	31	1 7 6
ditto	77	3 4 0	ditto	22	3 2 6
ditto	66	3 2 6	Wheal Basset	47	5 15 0
ditto	65	3 10 6	New Cook's Kitchen	30	4 6 0
ditto	54	3 13 6	Penstruthal	26	4 3 6
ditto	40	2 17 0	West Godolphin	24	7 2 6
West Seton	77	4 0 6	South Condurrow	23	6 13 6
ditto	58	4 1 0	North Treskerby	22	3 4 6
ditto	34	3 4 0	South Tolcarne	7	2 15 6
ditto	30	4 12 6	Wheal Seton	3	4 0 0
ditto	25	4 14 6	Williams's Precipitate	1	12 0 6
East Pool	77	3 8 6			

TOTAL PRODUCE.

West Tolgus	190	£2188 7 0		N. Cook's Kitchen	30	£129 0 0	
Mellanear	380	1249 13 6		Penstruthal	26	108 11 0	
West Seton	224	910 10 0		West Godolphin	24	171 0 0	
East Pool	136	494 11 0		South Condurrow	23	183 10 6	
South Crofty	118	237 18 0		North Treskerby	22	70 19 0	
Crinnis & Carlyon	81	356 9 0		South Tolcarne	7	19 8 6	
Carn Brea	53	111 7 6		Wheal Seton	3	12 0 0	
Wheal Basset	47	270 5 0		Williams's Precip.	1	12 0 6	

Average standard ..... £ 84 0 0 | Average produce 8¼
Average price per ton £4 3 0
Quantity of ore ..... 1565 | Quantity of fine copper 128 tons 8 cwts.
Amount of money £6485 10 6
LAST SALE.—Average standard ..... £ 93 4 0 | Average produce 6½
Standard of corresponding sale last month, £ 87 5 0—Produce, 8

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	233	£1276 4 0
Grenfell and Sons	247	1481 0 0
Nevill, Druce, and Co	272	1038 15 6
Williams, Foster, and Co	220	800 7 0
Mason and Elkington	178½	616 9 3
Charles Lambert and Co	414½	1272 14 9
Total	1565	£6485 10 6

NO SALE on Thursday next, April 11.

Copper ores for sale at the Royal Hotel, Truro, on Thursday week—Mines and parcels.—Devon Great Consols 848—South Caraden 480—Marke Valley 320—Glasgow Caradon 225—Hingston Down 173—Levant 163—Wheal Crebor 159—Gawton 120—Bedford United 121—West Maria and Fortescue 85—Phœnix Mines 80—Belcoe 21—Wheal Owles 17—Prince of Wales 14.—Total, 2836 tons.

TO JOINT-STOCK COMPANIES.

RETURNS AND NOTICES REQUIRED TO BE FILED AT THE OFFICE OF THE REGISTRAR OF JOINT-STOCK COMPANIES,

Under the Companies Acts, 1862 and 1867.

THE BOARD OF TRADE hereby give notice that it has been DETERMINED to ENFORCE the PUNCTUAL FILING of RETURNS and NOTICES, required to be rendered to the Registrar of Joint-Stock Companies, under the various sections of the above Acts of Parliament; and to PROCEED for the RECOVERY of PENALTIES incurred in cases of neglect to comply with the provisions of the law.

The Registrar has been instructed to prepare a List of Companies in default, in order that proceedings may be instituted against such companies, if the returns in arrear are not forthwith sent in to the Assistant Registrar, at his office, Truro.

Dated January 26, 1878.

ROMAN GRAVELS MINING COMPANY (LIMITED).

Notice is hereby given, that the Directors have THIS DAY DECLARED a DIVIDEND of £3000, free of income tax, being FIVE SHILLINGS PER SHARE on the 12,000 shares of the company, PAYABLE on and after the 30th to shareholders on the books of the company on the 12th instant.

The Transfer Books will be closed from the said 12th to the 30th instant, both days inclusive.

By Order, F. F. WILSON, Secretary.

20, St. Helen's-place, London, E.C., April 3, 1878.

THE LEADHILLS SILVER-LEAD MINING AND SMELTING COMPANY (LIMITED).

Notice is hereby given, that the Directors have THIS DAY DECLARED an INTERIM DIVIDEND of £3000, free of income tax, being THREE SHILLINGS PER SHARE on the 20,000 shares of the company, PAYABLE on and after the 17th to shareholders on the books of the company on the 9th instant.

The Transfer Books will be closed from the 9th to the 17th instant, both days included.

By Order, F. R. WILSON, Secretary.

20, St. Helen's-place, London, E.C., April 4, 1878.

THE BRAZILIAN COMPANY

(Late of No. 9, Liverpool-street, London, London, E,C,

HOLDERS OF SHARES in this (extinct) COMPANY, their EXECUTORS or ADMINISTRATORS will BENEFIT THEMSELVES by SENDING PARTICULARS OF THEIR HOLDINGS to "W. H. C.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

Name in full .....
Address .....
Number, ; numbers, ; and amount paid upon shares
Date of last communication from directors of the company.....

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OXIDE OF COBALT.
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In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and of the EAST ROCKS HEMATITE IRON ORE COMPANY (LIMITED).—ALL CREDITORS or CLAIMANTS of the ABOVE-NAMED COMPANY who have not received notice from the Official Liquidator thereof that their claims have been already admitted, are hereby required to COME IN and PROVE their SEVERAL DEBTS or CLAIMS at the Registrar's Office, Truro, on Saturday, the 13th day of April instant, at Eleven o'clock in the forenoon, or in default thereof they will be EXCLUDED from the BENEFIT of any DISTRIBUTION made before such proof. And for the purpose of such proof they are to attend in person, or by their solicitors or competent agents at the time and place above mentioned.

FREDERICK MARSHALL, Registrar.

Dated Registrar's Office, Truro, the 2nd day of April, 1878.

In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and of the CHARLOTTE UNITED MINES (LIMITED).—TO BE SOLD, under the direction of the Registrar of the said Court, on Thursday, the 18th day of April instant, at Eleven o'clock in the forenoon, at the CHARLOTTE UNITED MINES, in the parish of St. Agnes, within the said Stannaries, in One or more Lots, and subject to such conditions as shall be then and there stated and produced, all that the INTEREST of the said company of and in the several SETTS under which its mining operations have been carried on, together with the WHOLE of the

MINING PLANT, MACHINERY, MATERIALS, AND EFFECTS,

Belonging to the said company, and being within and upon the said Mine, and comprising—

ONE 36 in. cylinder PUMPING ENGINE, with ONE BOILER, about 10 tons, steam pipes, and all complete.

Two balance bobs, with boxes and balance rod connections; one 50 ft. shears, with stays and shieves; two 1-horse whims, with shaft tackle, shieves, stays, &c.; 50 fms. of wire rope; 50 fms. of chain; 80 fms. of 2 in. flat rods, pins and connections; double power crab winch; 40 fms. iron stave ladders; 40 fms. of launders from engine shaft.

ONE 22 in. WINDING and STAMPING ENGINE, 3 ft. 9 in. stroke, two fly wheels, 11 ft. diameter, axle for 16 heads, cams, lifters, with 8 ton BOILER, complete.

Capstan stand and stays; hand jack screw and one 3 in. drop screw; carpenters' bench and chest; grinding stone and frame; taps and plates; anvil, vice, and bench; iron blocks; bell and stand; 36 in. smiths' bellows; smiths' crane and chest; a quantity of new and old iron; timber and brick; wood houses and sheds; smiths' and miners' tools; bolts and burrs; kibbles, wheelbarrows, and other articles and effects in general use in mines.

For full particulars of which apply to the Official Liquidator of the said company, at the Stannaries Court Office, Truro; and for inspection of the said machinery, &c., to the Bailiff in charge at the Mine.

HODGE, HOCKIN, AND MARRACK, Truro.

(Solicitors for the Official Liquidator.)

Dated Stannaries Court Office, Truro, April 4th, 1878.

TO ENGINEERS, CONTRACTORS, COLLIERY OWNERS, MINING PROPRIETORS, AND OTHERS.

MR. WILLIAM RAW has been honoured with instructions from the HEALEY FIELD MINING COMPANY TO SELL, BY PUBLIC AUCTION, the WHOLE of their

VALUABLE WORKING PLANT,

On Wednesday, April 10th, 1878, comprising—74 tons of iron rails from 16 to 24 lbs. per yard; 3300 sleepers; 18 iron mine wagons; 5 iron tubs and trams; 7 wood ditto; 2 yard wagons; 3 bogie wagons; H. R. Marsden's patent 7-horse stone breaker, 15 in. by 7 in. jaw, all complete, nearly new; 6 horse portable steam-engine; 22 ft. saw bench; 4 saws and belts; water wheel, 28 ft. diameter, 4 ft. 8 in. breast; 6 ft. fly wheel and shafts; crushing mill fitted with three pairs of rollers complete; water wheel, 24 feet diameter 3 ft. 2 in. breast; water boxes; chaff mill complete; water-wheel 12 ft. diameter, for German or Zenner buddle, complete, in good order; water-wheel, 8 ft. diameter, 13 in. breast; 1 ditto, 6 ft. diameter, 15 in. breast; 1 ditto, 6 ft. diameter, 15 in. breast; shafting for round buddle; washing tubs, slime pits, and washing floors; double purchase winch; single ditto; wood dwelling house; stable and store house, slated, in good condition; small wood house; three wood sheds over stone breaker, engine, and saw mill; 500 yards of fence railing; 350 railing posts, cartwrights' and other cut timber; 7 new sets of copper prickers and stemmers; 10 ditto, nearly new.

Office fixtures; 18 new shovels; 20 new rakes; 350 pick shafts; 34 ladders; 29 barrows; 469 beech deals; whimsey 5 ft 6 in. drum; kibbles; 18 fms. of zinc pipes; 164 zinc air boxes; plate boring machine; 24 feet of boring rods; mining and smiths' tools; anvils, vices, and bellows; brass taps and brass; rail plate and other nails; 76 metal pipes; steel drill, and a quantity of chains; 20 cwts. of new iron, various sizes; 10½ cwts. of sheet iron; 19 cwts. of bolts and bars; 34 cwts. of metal castings, &c., &c., &c.

Sale to commence at Eleven o'clock precisely.

N.B.—Healey Field is one mile from Rowley Station on the Stockton and Darley branch of the North-Eastern Railway, and three miles from the Benfieldside Station on the Consett branch of the North-Eastern Railway.

Catalogues can now be had on application to the Auctioneer.

Sale Office, Blackhill, County Durham.

THE MERRYBENT ESTATE, IN THE NORTH RIDING OF YORKSHIRE.

MESSRS. WATSON AND SON are instructed by the Mortgagee, with power of sale, TO OFFER FOR SALE, BY AUCTION, at the King's Head Hotel, in Darlington, on Monday, the 29th day of April, 1878, at Two for Three o'clock in the afternoon, subject to conditions, all that VALUABLE FREEHOLD ESTATE, called

MERRYBENT,

Situate in the parishes of Melsonby and Middleton Tyas, in the North Riding of the county of York, consisting of—

TWO FARM HOUSES, with the necessary HOMESTEADS and FARM BUILDINGS, and PASTURE, MEADOW, and ARABLE LANDS, with COTTAGES thereon, containing altogether 347 A. 1 R. 19 P., or thereabouts, all now in the occupation of Mr. Matthew Martin.

The property is seven miles from Darlington and six from Richmond, at both which towns there are excellent markets.

A great portion of the estate is underlaid by the mountain limestone, which has been proved to be of considerable thickness and of good quality. Valuable veins of lead and copper have also been found, and there is an excellent bed of freestone on the property.

A line of railway from the Darlington and Barnard Castle branch of the North-Eastern comes within a very short distance of the eastern boundary of the estate, and by means of this railway the minerals can readily be carried to any part of the country.

The DRAWING ENGINE, BOILERS, and other fixed PLANT and MACHINERY now on the estate WILL BE SOLD along with it.

From its great mineral resources the estate cannot but prove a most valuable investment. The limestone is very well adapted for smelting purposes, and if properly worked a very considerable revenue could be derived from this source alone.

Plans and particulars may be obtained of the Auctioneers, at their offices in Darlington; of Messrs. SYMS and SON, Solicitors, 7, Furnival's Inn, London; or of Messrs. SCHOLEY, WILSON, and NORTH, Solicitors, Wakefield.

TO BE SOLD, BY PUBLIC AUCTION, under Decree of the Supreme Court of Newfoundland in Equity, in a suit between CHARLES FOX BENNETT, Plaintiff, and SMITH MCKAY and LEANDER GILL, Defendants, on Monday, the 2nd day of September next, at Twelve o'clock noon (if not previously disposed of by private sale), at the Court House, in St. John's, Newfoundland, that VALUABLE COPPER MINE and MINING PROPERTY called and known as the

UNION MINE,

Situate on the east and west sides of Tilt Cove, on the north side of Notre Dame Bay or Green Bay, Newfoundland, and near Cape John, with all ERECTIONS, IMPROVEMENTS, PLANT, and OTHER PROPERTY and EFFECTS thereto appertaining.

The mine is held under grant in fee from the Government of Newfoundland, containing two miles in length, by half a mile in breadth; a Licence of Occupation from the said Government, containing one mile square, west of and adjoining the Crown grant and land held under conveyance of fee-simple interests of former owners.

The title-deeds and documents, and plans and surveys of the property may be seen, and further information may be obtained, by application to PRESCOTT EMERSON, Esq., Q.C., Master-in-Chancery, at his office, in St. John's; or to either of the undersigned solicitors for the parties, or to either of the parties.

Conditions of sale will be published hereafter.

PRESCOTT EMERSON, Q.C., Master in Chancery,

St. John's, Newfoundland, January 23rd, 1878.

For further particulars, apply to C. T. BENNETT, Esq., No. 55, Queen's-square, Bristol; Messrs. HENRY BATH AND SON, Gresham House, London; or to PINSENT AND GREENE, Solicitors to the Plaintiff; WINTER AND CARTER, Solicitors for Defendant McKay.

TO BE SOLD, ONE 20-H.P. SEMI-PORTABLE ENGINE and BOILER, with link motion, by Fowler and Co., Leeds, with PUMPS and INJECTOR, and all necessary FITTINGS, connected by strong gear to winding drum complete; the whole in first-rate condition, and nearly new.

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Also, TWO cast-iron T-BOBS, 3 feet centres, with pedestals and brasses. ONE 16 inch LITT OF PUMPS, with bucket clack, windbore, &c., complete, 36 tons in all, 24 yards in length. ONE 10 in. LIFT complete, with sliding windbore, &c., 35 yards in length, 7 tons.

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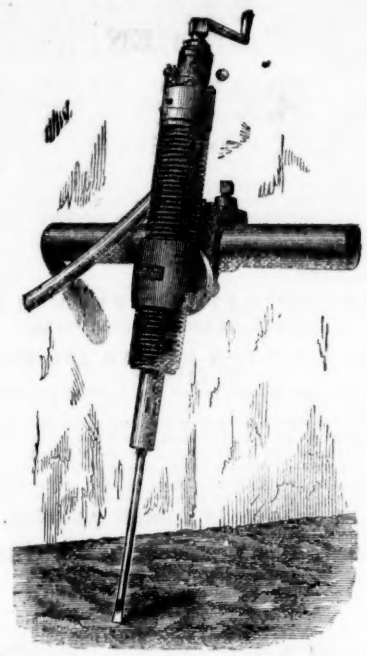

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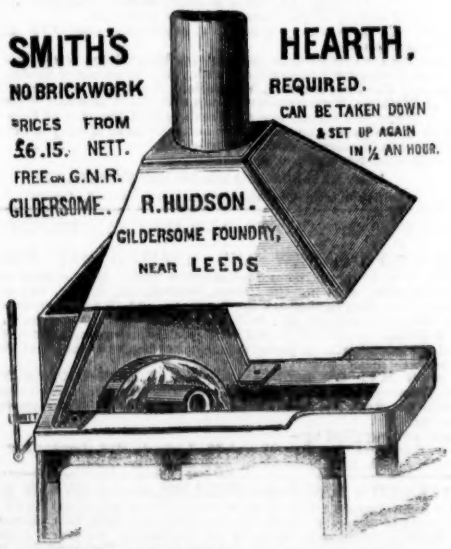

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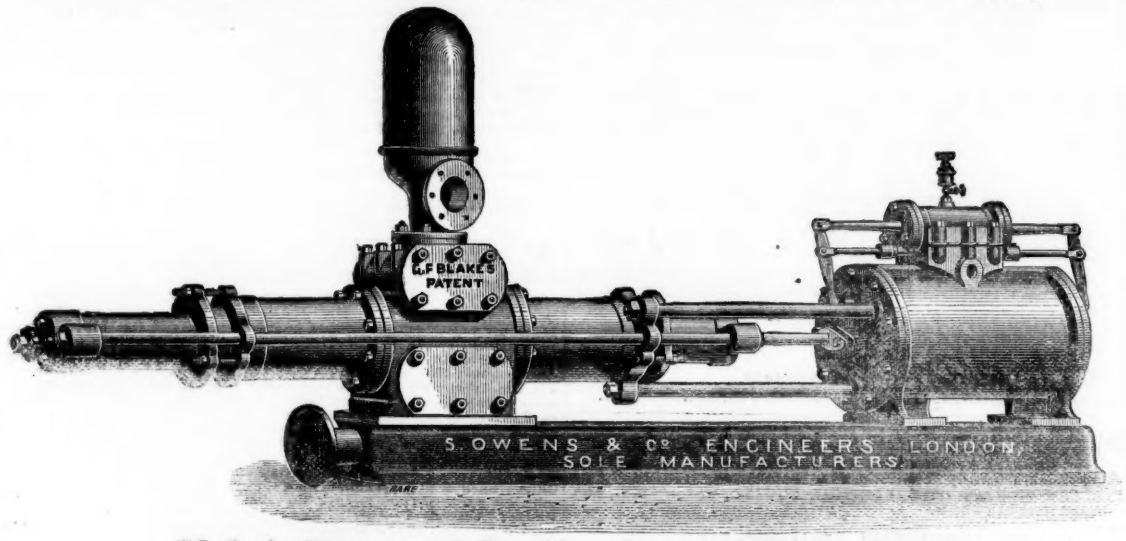

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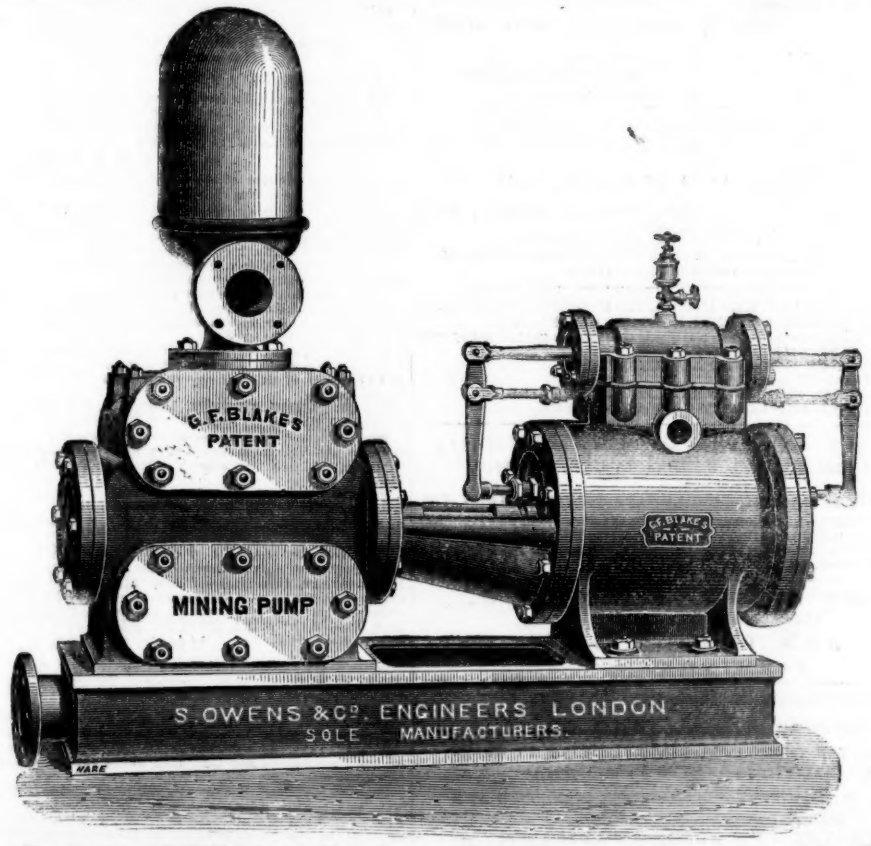

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Length of stroke ... ... In.	18	18	18	24	24	24	24	24	24	24	24	24	30	30	30	30	30	36	36	36	42
No. of strokes per minute..	30	30	30	25	25	25	22	22	22	22	22	22	22	22	22	20	20	17	17	17	15
Quantity in gallons per hour, approxmately ..	1440	2610	4200	5940	2940	4620	6600	2646	4158	5940	10620	2646	5160	7500	13260	4586	9000	12360	15660	6720	1200

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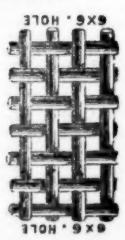

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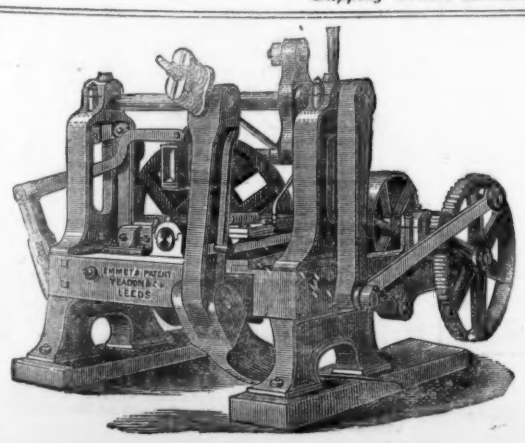

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THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares	Mines.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
1500	Alderley Edge, c, Cheshire*	10 0 0	—		12 11 8	0 5 0	Jan. 1876
4000	Brookwood, c, Buckfastleigh	1 16 [illegible]	1	½ 1	3 16 0	0 2 0	Nov. 1875
2000	Bryn Alyn,* l, Denbigh	10 0 0	—		0 7 0	0 7 0	Jan. 1877
6400	Cashwell, l, Cumberland*	2 10 0	1½	1¾ 2¼	1 9 6	0 2 0	Aug. 1876
1000	Carn Brea, c, t, Illogan†§	36 7 6	45	42½ 45	308 0 0	1 0 0	Feb. 1874
2450	Cook's Kitchen, t, Illogan†§	24 4 9	3	2 2½	11 17 0	0 7 6	Jan. 1873
10 40	Devon Gt. Consols, c, Tavistock†*	1 0 0	3¼	2½ 3	116 15 0	0 5 0	July 1877
4296	Dolcoath, c, t, Camborne	10 14 10	33	30 32½	112 6 3	0 5 0	Mar. 1878
6000	East Black Craig,* l., Scotland	5 0 0	—		0 10 0	0 10 0	Feb. 1877
[illegible]00	East Darren, l, Cardiganshire	32 0 0	—		235 10 0	1 0 0	Aug. 1876
6400	East Pool, t, c, Illogan	0 9 9	9	8½ 9	15 6 9	0 2 0	Feb. 1878
40000	Glasgow Cara., c* [30,000 £1 p., 10,000 15s. p.]		1⅜	1¼ 1⅜	0 13 4	0 0 6	Feb. 1878
7500	Gorsedd and Merllyn Cons., l, Flint	2 10 0	5	4½ 5	0 5 0	0 5 0	Aug. 1877
15000	Great Dyliffe,* l, Montgom	4 0 0	3	2 3	0 2 6	0 2 6	Apr. 1876
1 000	Great Laxey, l, Isle of Man*	4 0 0	20½	18½ 19½	23 3 0	0 10 0	Jan. 1878
615	Gt. Retallack, l, bl, Perranzabuloe	5 18 6	—		0 1 6	0 1 6	May 1876
6400	Green Hurth, l, Durham*	0 6 0	1¾	1½ 1¾	1 18 0	0 3 0	Mar. 1878
2 000	Grogwinion, l, Cardigan*	2 0 0	4	3¾ 4¼	0 14 0	0 2 0	Jan. 1878
9830	Gunnislake (Clitters), t, c	5 5 0	2¼	2½ 2¾	0 13 9	0 1 0	Oct. 1876
60000	Holmbush, a, c, s-l, Callington*	1 0 0	1¾	1½ 1¾	0 4 6	0 0 6	Sept. 1877
2800	Isle of Man, l, Isle of Man*†	25 0 0	—		82 5 0	0 10 0	Feb. 1876
20000	Leadhills,* l, Lanarkshire	6 0 0	3⅞	3⅝ 3⅞	0 15 0	0 3 0	Mar. 1878
400	Lisburne, l, Cardiganshire	18 15 0	75	65 75	585 10 0	1 0 0	Feb. 1878
14000	Llanidloes,* l, Montgomery	3 0 0	1¼	¾ 1¼	0 9 0	0 4 6	Nov. 1876
9000	Marke Valley, c, Linkinhorne	5 3 6	¾	⅝ ¾	7 15 0	0 2 0	Jan. 1876
10000	Mellanear Copper, Hayle*	2 0 0	4¼	3¾ 4¼	0 2 0	0 2 0	Jan. 1878
9000	Minera Mining Co., l, Wrexham*	5 0 0	16	14 16	67 10 8	0 2 6	Feb. 1878
20000	Mining Co. of Ireland, cl, c, l*	7 0 0	—		23 17 6	0 2 6	Jan. 1878
444	North Busy, c, Chacewater	3 9 6	5	4 5	1 10 0	1 0 0	July 1877
10289	North Hendre, l, Wales	2 10 0	—		2 2 6	0 10 0	Mar. 1878
30000	Panty Mwyn,* l, Mold (8794 iss.)	2 0 0	3	2¼ 3	0 1 0	0 1 0	Feb. 187[illegible]
6000	Penn-an-drea Con., t, Redruth	0 8 6	6¾	6¼ 6¾	0 9 0	0 9 0	June 1877
5000	Penhalls, t, St. Agnes	3 2 6	1	¾ 1	3 18 6	0 2 0	July 187[illegible]
6000	Pennant, l, bar, North Wales*	5 0 0	5	4½ 5	0 10 0	0 5 0	Mar. 1878
45793	Penstruthal,* t, c, Gwennap	2 0 0	5s.	⅛ ¼	0 2 8	0 0 8	Nov. 1875
18000	Prince Patrick,* s-l, Holywell	1 0 0	2¼	1¾ 2¼	0 14 0	0 1 3	Jan. 1876
10000	Red Rock,* l, Cardigan	2 0 0	2½	2 2½	0 4 0	0 2 0	Jan. 1878
12000	Roman Gravels, l, Salop*	7 10 0	8¾	8 8½	7 15 0	0 5 0	Mar. 1878
512	South Caradon, c, St. Cleer	1 5 0	85	80 85	742 10 0	1 0 0	Mar. 1878
6123	South Condurrow, t, c, Camborne‡	6 5 6	11½	10½ 11	3 5 0	0 7 0	Jan. 1878
12000	St. Harmon,* l, Montgom	3 0 0	3	2½ 3½	0 6 0	0 3 0	July 1877
10000	So. Pr. Patrick,* s-l. (8000 sh. issued)	1 0 0	—		0 7 0	0 1 0	Oct. 1875
1 000	Tankerville, l, Salop*	6 0 0	4	3¼ 4	4 17 0	0 5 0	Dec. 1876
6000	Tincroft, c, t, Pool, Illogan†	9 0 0	12½	11 13	50 8 6	0 5 0	May 1877
15000	Van, l, Llanidloes*	4 5 0	26	24 26	22 15 6	0 12 0	Jan. 1878
3000	W. Chiverton, l, Perranzabuloe†	12 10 0	14	13 14	55 10 0	0 10 0	Feb. 1878
1783	West Poldice, St. Day	10 0 0	15	13 15	1 19 0	0 4 0	July 1876
512	West Tolgus, c, Redruth	95 10 0	77½	67 69	26 15 0	1 10 0	Feb. 1878
2048	West Wheal Frances, t, Illogan	28 1 3	3½	3 3½	3 12 6	0 5 0	Oct. 1872
12000	West Wye Valley,* l, Montgom	3 0 0	3½	3½ 4	0 12 0	0 3 0	Nov. 1877
1024	Wh. Eliza Consols t, St. Austell	18 0 0	—		15 10 0	1 10 0	Oct. 1877
2048	Wheal Jane, t, Kea	2 13 10	1	¾ 1	8 5 0	0 5 0	July 1875
4295	Wheal Kitty, t, St. Agnes	5 4 6	2¼	1¾ 2¼	11 19 6	0 2 6	Dec. 1874
25000	Wh. Newton, a, c, s, t, Calstock*	1 0 0	5½	5 5½	0 8 6	0 4 0	Sept. 18.7
80	Wheal Owles, t, St. Just§	58 15 0	100	90 100	522 10 0	4 0 0	Aug. 1872
6000	Wheal Prussia, t, Redruth	0 5 0	7½	7 7½	0 4 0	0 1 0	July 1877
10000	Wye Valley, l, Montgomery*	3 0 0	2¼	1¾ 2¼	0 10 6	0 4 6	Oct. 1876

FOREIGN DIVIDEND MINES.

Shares	Mines.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
5500	Alamillos, l, Spain*†	2 0 0	1¼	1¼ 1¾	1 19 3	0 1 0	April 1878
30000	Almada and Tirito Consol., s*†	1 0 0	⅜	⅜ ⅝	0 6 3	0 1 0	May 1876
20000	Australian, c, South Australia†	7 7 6	2	1½ 2	0 19 6	0 1 6	July 1877
10000	Battle Mountain,* c, (6240 part pd.)	5 0 0	—		0 10 0	0 10 0	Nov. 1872
15000	Birdseye Creek, g, California*	4 0 0	1	¾ 1	0 14 0	0 2 6	June 1874
20000	Cape Copper Mining,*† So. Africa	7 0 0	31	29 31	30 10 0	0 17 6	Mar. 1878
34433	Cedar Creek, g, California*	5 0 0	⅜	⅛ ⅜	0 5 0	0 2 6	June 1873
35000	Cesena Sul. Co., Romanga, Italy*	10 0 0	—		0 10 6	0 3 0	Aug. 1877
15000	Chicago, s, Utah*	10 0 0	1½	1 1½	2 8 0	0 4 0	Nov. 1876
65000	Colorado United, s-l, Colorado*†	5 0 0	1¾	1¼ 1¾	0 13 6	0 4 0	Jan. 1875
10000	Copiapo, c, Chili* (£20 shares)	16 15 0	—		7 11 5	0 3 0	May 1877
00000	Don Pedro North del Rey*†	0 16 0	⅜	⅛ ⅜	2 5 9	0 2 0	Mar. 1872
23500	Eberhardt & Aurora, s, Nevada*†	10 0 0	6¼	5¾ 5¾	1 8 0	0 3 0	Dec. 1877
70000	English & Australian, c† S. Aust.	2 10 0	1¼	1 1¼	2 15 9	0 1 0	Mar. 1877
30900	Flagstaff, s, Utah*	10 0 0	⅜	⅝ ⅞	4 2 0	0 5 0	July 1873
25000	Fortuna, l, Spain*†	2 0 0	5¼	4¾ 5¼	6 19 10	0 5 0	April 1878
55000	Frontino & Bolivia, g, New Gran.*†	2 0 0	2	1½ 2	0 1 0	0 1 0	June 1876
30000	Gold Run, hyd.	1 0 0	—		0 2 4	0 0 4	Oct. 1872
68000	Kapunda Mining Co. Australia†	1 3 0	—		0 2 4	0 0 6	June 1873
20000	Last Chance, s,* Utah	5 0 0	⅞	⅝ ⅞	0 14 0	0 2 0	July 1873
15000	Linares, l, Spain*†	3 0 0	6¼	5¾ 6¼	17 7 10	0 5 0	April 1878
65000	London and California, g*†	2 0 0	⅜	⅜ ⅝	0 1 0	0 1 0	July 1875
7837	Lusitanian, Portugal*† (£5 sh.)	3 10 0	—		1 11 6	0 1 6	Mar. 1873
5000	Mamm Copperopolis of Utah, c, s	10 0 0	—		0 5 0	0 5 0	Dec. 1872
5000	Mountain Chief, s, Utah*	10 0 0	—		0 4 0	0 4 0	Jan. 1873
10000	Pontgibaud, s-l, France†	20 0 0	31	28 30	25 8 0	1 11 0	Nov. 1877
100000	Port Phillip, g, Clunes*†	1 0 0	¾	⅝ ¾	1 10 0	0 1 0	Jan. 1878
54000	Richmond Consols, s, Nevada*†	5 0 0	10	9½ 10	4 4 0	0 7 6	Feb. 1878
40000	Santa Barbara,* g, Brazil	0 10 0	1½	1 1½	0 3 9	0 1 3	May 1877
120000	Scottish Australian Mining Co.*†	1 0 0	1¾	1½ 1¾	15 per cent.		Nov. 1877
60000	Scottish Austral. Mining Co., New	0 10 0	⅞	¾ ⅞	15 per cent.		Nov. 1877
112500	Sierra Buttes, g, California*†	2 0 0	1½	1¼ 1½	1 18 0	0 2 0	Oct. 1877
60000	South Aurora, s, Nevada*	5 0 0	⅜	⅛ ⅜	0 14 2	0 2 0	Nov. 1873
£253000	St. John del Rey*† (£5 stock & multiples dealt in)			300 310	½ year	20 p. ct.	for Dec. 1876
20000	Tolima, g, s* So. America	5 0 0	—		0 11 6	0 6 6	May 1874
25000	Victoria (London)*, g, Australia	1 0 0	⅜	⅜ ⅜	0 12 6	0 0 7½	Jan. 1878
15000	Western Andes, s,* New Granada	5 0 0	—		0 12 0	0 12 0	July 1876
21000	W. Prussian (5500 pref. sh. 10l. pd)	10 0 0	11¼	10½ 11	1 8 0	0 4 0	Jan. 1878

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Last Call.
5000	Anguilla Phosphate, West Indies (4000 issued)	10 0 0	—		Fully pd.
12000	Argentine, g, Argentine Republic	5 0 0	1½	½ 1½	Fully pd
3000	Bellavista, s, Peru* (£10 shares)	10 0 0	—		Fully pd.
30000	Blue Tent, hyd., California	5 0 0	3	2 3	Fully pd.
49935	Chontales, g, s, Nicaragua*†	2 0 0	¾	⅝ ¾	Fully pd.
16000	Condes of Chili, s-l	5 0 0	—		Fully pd.
20000	English Australian, g, Victoria*	1 0 0	⅞	⅝ ⅞	Fully pd.
35000	Excelsior Hydraulic Gold Washing Co., California*	6 0 0	—		Dec. 1871
100000	Exchequer, g, s, California*†	1 0 0	⅛	⅛	Fully pd.
40000	Holcombe Valley, g,* California	1 0 0	—		Fully pd.
9000	Hornachos,* s-l, Spain	10 0 0	13	12½ 13	Fully pd.
12000	Hultafall,* l, bl, Orebro, Sweden	5 0 0	—	5 5½	Fully pd.
12000	Hunter Consolidated, s-l, Utah	10 0 0	—		Fully pd.
20000	Imperial Brazilian Collieries, Brazil*	5 0 0	—		Fully pd.
00000	I. X. L., g, s, California*	1 0 0	—		Fully pd.
50000	Javali, g, Nicaragua*	2 0 0	⅜	¼ ⅜	Fully pd.
3500	La Manche, l, Newfoundland	10 0 0	—		Fully pd.
12000	Lanestosa,* l, z, Viscaya, Spain (£2 shares)	1 15 0	—		Mar. 1876
75000	Malabar, g, Colombia* (67165 issued)	1 0 0	¼	⅛ ¼	Fully pd.
40000	Malpaso, g, Colombia* (7400 pref. shares, fully paid)	1 0 0	⅛	¼ ⅜	Fully pd.
12000	Menzenberg, c, Honnef, Germany*	5 5 0	—		Fully pd.
4588	New Bensberg, l, l, Germany	5 0 0	—		Nov. 1876
66000	New Quebrada, c, Venezuela*	5 0 0	1⅝	1½ 1⅝	Fully pd.
20000	New Zealand Kapanga, g, Coromandel*	5 0 0	¾	½ ¾	Fully pd.
3000	Oregon,* g, Oregon, U.S. (preference shares)	4 0 0	—		Fully pd.
50000	Panulcillo, c, Chili*† (£80000 debentures)	4 0 0	1½	1 1½	Fully pd.
80000	Pestarena United, g, Italy*†	3 0 0	⅜	¼ ⅜	Fully pd.
50000	Providencia and New Rosario, s, Mexico*	1 0 0	—		Fully pd.
50000	Rica, g, Colombia* (40000 issued)	1 0 0	¼	⅛ ¼	Fully pd.
£2,181,000	Rio Tinto,* c, Huelva, Spain	Stock	56	54 56	Fully pd.
100000	Rossa Grande, g, Brazil*† (£1 shares)	0 19 0	⅛	⅛	July 1872
30000	Russia Copper, Orenburg and Ufa*†	10 0 0	1½	1¼ 1⅝	Fully pd
25000	San Pedro, c, Chili*	2 0 0	½	¼ ½	Fully pd
10000	Silver Plume, s, Colorado*	1 0 0	—		Fully pd
30000	Tecoma, s, Utah*	10 0 0	⅝	⅜ ⅝	Fully pd
43174	United Mexican, s, Mexico*†‡	28 15 3	2¼	1¾ 2¼	May 1875
14000	Utah, g, s-l, Utah*	5 0 0	—		Fully pd.
25000	Virneberg, c Rheinbreitbach, Germany* (£2 shares)	1 15 0	—		Jan. 1878
15000	Yorke Peninsula, c, South Australia	1 0 0	½	¼ ½	Fully pd.
40000	Yorke Peninsula, c, South Australia Preference	1 0 0	1	¾ 1	Fully pd.

§ Have made calls since last dividend was paid.

FOREIGN AND MISCELLANEOUS STOCKS, BONDS, LOANS, AND TRUSTS.

	Closing Prices.	
Argentine, 1868, 6 per cent.	70	72
Bolivia, 6 per cent.	23	24
Brazilian, 1865, 5 per cent.	94	96
Chilian, 1866, 7 per cent.	102	104
City of Providence, 5 p.c. coupon bnds	100	102
Egyptian, 5 per cent. pref.	54½	55
Do., unified debt, scrip	29¼	29¾
Do., 7 per cent., V.M.L.	62	65
Do., 9 per cent. guar.	65	70
Do., K. Daira Sanieh	39	41
Foreign and Col. Gov. Trust, 6 p. ct.	62	66
Do., 5 per cent., 2d issue	50	55
Do., 6 per cent., 3d issue	55	60
Do., 1872, 4th issue	50	55
Do., 1873, 5th issue	50	55
Peruvian, 1870, 6 per cent.	14	14½
Do., 1872, 5 per cent	11¾	12¼
Russian, 5½ per cent. L. Mort.	—	
Spanish, Quicksilver Mort., 5 p. ct.	97	99
United States Mort., 6 per cent.	98	100

NON-DIVIDEND MINES.

Shares.		Paid.	Last wk.	Clos. pr
40000	Aberdaunant, l, Llanidloes*	1 0 0	1¼	1 1¼
10000	Aberystwith,* s-l, Cardigan	5 0 0	—	
80	Albion, i, Cornwall	100 0 0	—	
7800	Alvig. & Burng.,* t, St. Aust.	3 0 0	1⅜	1⅛ 1⅜
12000	Assheton, l, Carnarvonshire*	5 0 0	1	¾ 1
50000	Ballycummisk,* c, Schull	2 0 0	—	
12000	Bedford Unit.,* c, Tavist. (1l. liab.)	—	¼	⅛ ¼
28000	Belstone,* c, Devon (27,000 fy. pd.)	1 0 0	—	
800	Blaen Caelan,* l, Cardigan	3 0 0	5	4¾ 5
3937	Blue Hills, t, c, St. Agnes	3 12 6	3¼	3 3¼
30000	Bodidris,* l, bl, Denbighshire	1 0 0	1¼	1⅛ 1⅜
1000	Bollihope Vale,* s-l, Durham	5 0 0	—	
200	Botallack, t, c, St. Just‡	123 15 0	—	
2000	Bowden Hill,* mn	1 0 0	—	
6000	Bradwell Moss Rake	1 0 0	1	⅞ 1
50000	Cambrian,* s-l, c, Cardiganshire	2 0 0	3	3 3¼
3348	Cargoll, s-l, Newlyn‡	7 4 0	2¼	2 2¼
10000	Caron, l, Cardigan*	2 0 0	2¾	2¼ 2¾
20000	Central Foxdale, l, I. of Man* (2l. sh.)	1 5 0	—	
10000	Central Van,* l, bl, Llanidloes	5 0 0	—	
128	Clementina, l, Llanrwst	20 0 0	35	25 35
7500	Combellack,* t, Wendron	2 0 0	—	
6000	Combmartin, s-l, North Devon	0 7 0	⅛	¼ ½
24000	Court Grange, s-l, Cardiganshire	1 0 0	1¼	1 1¼
2000	Cwm Dwyfor,* c, s-l, Carnarvonsh	1 0 0	—	
3000	Cwmystwith (New) [5l. shares]	4 0 0	—	
1 80	D'Eresby Cons., l, bl, Carnarvon	10 0 0	12½	10 12½
512	D'Eresby Mountain, l, bl, Llanrwst	20 0 0	75	65 75
20000	Denbighshire Consolidated, l*	3 0 0	1	½ 1
12000	Derwent,* l, Durham	4 0 0	2	1½ 2
10000	Dubby Syke, l, Durham*	0 15 0	⅜	¼ ⅜
6144	East Caradon, c, St. Cleer‡	2 16 6	1	¾ 1
4000	East Chiverton, l, Perranzabuloe	7 1 0	3	2 3
3000	East Craven Moor*, l, Pateley Bdge	10 0 0	10	9 10
6000	East Goginan, l, Cardigan	2 0 0	—	
18000	East Van, l, Llanidloes*	5 0 0	4¾	5¼ 5¾
1722	East Wh. Lovell, t, Helston	9 1 0	1	¾ 1
20000	Elgar,* s-l, Cardiganshire	1 0 0	1¼	1 1¼
8000	Fronvellan, l, Mont.* [4000 sh. fy. pd.]	1 0 0	—	
3950	Gawton, c, Tavistock	4 5 6	¼	⅛ ¼
12000	Glan Clwyd,* l, Gwyddelwern	1 0 0	—	
14000	Glenroy,* s-l, Isle of Man	4 5 0	⅞	¾ ⅞
10000	Glyn,* l, Llanidloes	2 0 0	⅝	⅜ ⅝
12000	Goginan, & Level Newydd, Card., l	2 10 0	—	
100000	Gold, g, Merionethshire	1 0 0	—	
20000	Goren,* s-l, Carmarthen	1 0 0	1	¾ 1
20000	Gt. E. Foxdale, l, I. of Man (1l. sh)	0 18 0	—	
12000	Great Holway,* l, Flintshire	5 0 0	5½	5 5½
9500	Great Pant-y-Pydew, l, Holywell	2 0 0	—	
256	Gt. Wheal Eleanor, t, North Bovey	1 15 0	2	1¾ 2
10000	Harehope Gill,* l, Durham (£1 sh.)	0 5 0	—	
600	Hartington Moor,* carb l, Derby	1 0 0	2	1½ 2
6400	Harwood,* l, Durham	0 15 0	4s.	3s. 4s.
1024	Herodsfoot, l, near Liskeard†	8 10 0	8	7 8
18000	Hingston Down, c, Calstock*†	0 5 0	⅝	¼ ½
5000	Hush Eisteddfod Minera,* l	2 0 0	—	
200	Islay,* l, Scotland	28 0 0	—	
2500	Killaloe, sl, Tipperary‡	1 0 0	—	
6000	Killifreth, t, Chacewater	2 1 0	⅛	⅛
25000	Kingston Con., s-l, Stoke Climsland	1 0 0	—	
	Ditto, preference	1 0 0	1⅛	1 1⅛
12000	Ladywell,* l, Salop	2 10 0	1⅛	⅞ 1⅛
12000	Ditto, 10 per cent. pref., 1l. each	0 10 0	⅝	⅜ ⅝
2500	Levant, c, t, St. Just	9 18 6	—	
6000	Livingstone Consols, t, St. Agnes	0 10 0	1	¾ 1
6120	Loveli, t, Wendron	0 16 0	2	1½ 2
25000	Llanrhaiadr, l, Montgomery*	2 0 0	—	
30000	Llanrwst,* l, Carnarvon	2 0 0	4¼	4 4¼
24	Mawston,* l, South Wales	50 0 0	60	55 60
6000	Medlyn Moor, t, Wendron	1 17 4	—	
11000	Melyndw , l, Cardigan*	3 0 0	1¼	¾ 1¼
11000	Monydd Gorddu, l, Cardigan* (Red.)	5 0 0	—	
12000	Morfa Du, z, g, s, Anglesea	1 0 0	⅞	⅝ ⅞
25000	Nant-y-Ronen, s-l, Cardigan*	1 0 0	—	
15000	Nascent Copper*	1 0 0	—	
4768	New Bronfloyd,* ., Cardigan (5l. sh.)	3 16 0	4½	4⅜ 4½
8000	New Dolcoath, t, c, Camborne*	3 0 0	1¼	1⅛ 1¼
20000	New East Foxdale, s-l, Isle of Man.	0 15 0	—	
16000	New Fowey Consols, t, St. Blazey*.	3 0 0	2	1½ 2
1492	New Hendra, t, Breage	3 9 0	—	
3200	New South Merllyn, l, Flint*	2 10 0	1	½ 1
3500	New Tincroft,* t, Lelant	6 0 0	3	2½ 3
5000	New Wheal Emma, c, Buckfastleigh	2 0 0	—	
4000	North Cornwall,* l, Cornwall	5 0 0	5½	5¼ 5½
25000	North Laxey,* Isle of Man	2 0 0	¼	⅛ ¼
2000	North Levant, t, c, St. Just‡	12 8 0	1	¾ 1
20000	North Prince Patrick,* l, Holywell.	1 0 0	—	
5936	North Treskerby, c, St. Agnes	5 7 10	—	
2000	North Wheal Towan, t, c, Illogan	1 19 6	—	
6400	Oola Hills,* s-l, Limerick	5 0 0	—	
12000	Pandora,* l, Carnarvon	2 0 0	1	¾ 1
6000	Park Valley,* s-l, North Devon	0 4 0	1	¾ 1
16923	Parys Mountain,* c, Anglesea	3 0 0	½	⅜ ½
12000	Phœnix, & W. Phœnix, t, c, Link.§	5 7 3	5	4½ 5
4000	Pateley Bridge, l, Yorkshire	5 0 0	4	3 4
12000	Plynlimmon, l, Llanidloes*	2 0 0	6s.	4s. 6s.
10000	Port Nigel,* s-l, Carnarvonshire	2 0 0	½	¼ ½
2000	Prideaux Wood, t, Llanivery	5 0 0	—	
5182	Prince of Wales, c, Calstock‡	2 4 0	¼	⅛ ¼
6000	Relistian Consols, c, Gwinear	0 10 0	⅝	½ ⅝
15000	Rookhope, l, Durham*	1 10 0	1	⅞ 1
5000	Silvercross,* c, t, Marazion	1 0 0	—	
4200	Snowbrook, s-l, Montgomery	5 0 0	—	
000	So. Cwmystwith, l, Cardiganshire.	2 0 0	4	3 4
6000	South Darren, l, Cardigan*	1 10 0	2	1⅞ 2⅛
512	South Dolcoath, c, t, Redruth	12 5 0	1½	1 1½
5000	So. Molton Cons., s-l, No. Devon	0 3 6	—	3s. 6d.
18000	South Roman Gravels, l*	1 10 0	⅝	½ ⅝
6000	South Roskear, t, c, Camborne	6 10 0	—	
6000	South Tolcarne, t, c, Camborne	2 11 6	¾	½ ¾
937	South Wheal Crofty, c, Illogan	40 0 10	9	8 9
4500	South Wh. Frances, c, Illogan†	7 12 4	2½	2 2½
6000	St. Lawrence, Amal., l, Flintshire*	2 0 0	—	
10000	St. Patrick, l, Halkin, Holywell*	1 0 0	1½	1 1¼
6000	Success, &c., l, Derb. (12,000l. called)	1 0 0	—	
16000	Sunnyside,* l, Durham	2 0 0	2½	2 2½
30000	Talybont, s-l, Cardiganshire	1 0 0	1¼	1 1¼
6400	Teesdale,* l, Durham	1 0 0	4s.	2s. 4s.
14000	Teign Valley, l, bar., Bridford	1 0 0	—	
10000	Temple, l, Cardigan*	1 0 0	3½	3¼ 3½
10000	Tolgus Consols,* c, Redruth	5 0 0	5	4 4½
12000	Trebeigh Consols, s-l, St. Ive	0 9 6	⅜	¼ ⅜
5000	Treleigh Wood, t, Redruth	6 1 0	—	
12000	Trethellan, s-l, Crantock*	2 0 0	—	
640	Truro*, l, Nerquis, Flintshire	10 0 0	—	
10000	Tyn-y-Fron,* l, Cardigan	1 0 0	1⅝	1⅜ 1⅝
20000	Van Consols, l, Llanidloes*	2 10 0	—	
1000	Vaughan*, l., Cardiganshire	10 0 0	—	
12000	West Assheton, l, Carnarvon	1 0 0	¾	½ ¾
6000	West Basset, c, Illogan†‡	6 6 8	¾	½ ¾
5500	West Combmartin, s-l, North Devon	1 0 0	—	
7000	Ditto	0 2 6	—	
3000	W. Craven Moor, l, Pateley Bridge*.	10 0 0	10	9 10
5000	West Godolphin, t, c, Breage	2 10 0	1½	1¼ 1½
12000	West Goginan,* Cardiganshire	2 0 0	⅝	⅜ ⅝
10000	West Llangynog, s-l, Montgomery	2 0 0	—	
3000	West Mary Ann, l, Menheniot	0 3 6	¼	⅛ ¼
50000	West Milwr, s-l, Flint	1 0 0	—	
5000	West of England Granite Company.	2 0 0	2	2
20000	West Pateley Bridge, l, Yorkshire	1 0 0	2½	2 2½
1000	West Roskear, t, s-l, bl, c, Camborne.	2 0 0	—	15 17
12000	West Tankerville,* l, Salop	3 0 0	⅞	½ ¾
3000	Ditto, 15 per cent pref.	3 0 0	—	
3000	West Wheal Peevor, t, Redruth	0 10 0	—	
600	West Wheal Seton, c, Camborne†	47 0 0	12	10 12
6000	Wheal Agar, c, Illogan	12 0 0	4½	3¾ 4¼
512	Wheal Basset, c, Illogan‡	26 2 6	8	7 8
6000	Wheal Coates, t, St. Agnes	2 0 0	—	
2635	Wheal Comfort, c, Gwennap	1 5 0	—	
6000	Wheal Crebor, c, Tavistock	4 3 0	¾	½ ¾
5179	Wheal Grenville, c, Camborne*	3 11 6	3½	3 3½
12000	Wh. Mary Hutchings,* t, Plympton‡	1 18 6	3½	3⅜ 3½
3000	Wheal Peevor, t, Redruth	7 11 0	6½	6¼ 6½
12000	Wheal Russell, c, Tavistock	2 1 6	—	
4096	Wheal Uny, t, c, Redruth	14 0 6	1⅛	⅞ 1⅛
2324	White Cliff,* l, Llanrwst	5 0 0	—	
25000	Wicklow, c, sul, i, Wicklow	2 10 0	—	

b, blende; cl, coal; c, copper; g, gold; l, lead; s, silver; sl, slate; s-l, silver-lead; t, tin; z, zinc.

* Limited Liability Companies; † quoted on the Stock Exchange; ‡ have paid dividends.

IRON AND COAL COMPANIES.

Shares.	Company.	Paid.	Prices.	
£100	Abbot, John, and Co. [L.]	£75 0 0	13	12 dis.
15	Albion Steel and Wire Co. [L.]	14 0 0		—
5	Alltami Colliery Co. [L.]	5 0 0	4	5
100	Ashbury Co. [L.]	90 0 0	55	45 dis.
10	Bagnall, John, and Sons [L.]	10 0 0	3	3½
10	Benhar Coal Co. [L.]	10 0 0	4	3 dis.
50	Bilbao Iron Ore Co. [L.]	50 0 0	27	28
10	Bilson & Crump Meadow Coll. Co. [L.]	10 0 0		—
4	Blaen Cwmbach Coal Co. [L.]	4 0 0		—
50	Blaenavon Iron and Steel Co. [L.]	50 0 0		—
100	Bolckow, Vaughan, and Co. [L.]...A	50 0 0	5	6 pm.
50	Bowling Iron Co. [L.]	50 0 0		—
50	Britannia Ironworks [L.]	25 0 0		—
50	Brown, Bailey, and Dixon [L.]	40 0 0	11	9 dis.
100	Brown, John, and Co. [L.]	70 0 0	13	12 dis.
5	Cakemore Colliery Co. [L.]	5 0 0		5
100	Cammell and Co. [L.]	80 0 0	6	5 dis.
20	Cannock and Huntington Coal [L.]	10 0 0	8½	7½ dis.
10	Cardiff & Swansea St. Coal Co. [L.]	9 0 0	½	1
10	Cardigan Steel and Wire Co. [L.]	8 10 0		—
10	Central Swedish Iron and Steel [L.]	10 0 0	1	2
5	Chapel House Colliery	5 0 0	2¼	3
50	Charlton Iron Co. [L.]	50 0 0	12	14
50	Chatterley Iron Co. [L.]	45 0 0	26	25 dis.
10	Chillington Iron Co. [L.]	10 0 0	2½	3½
10	Consett Iron Co. [L.]	7 10 0	16	17 pm.
1	Consett Spanish Ore [L.]	1 0 0	¼	¼ dis.
50	Cooke, William, and Co. [L.]	40 0 0	32	30 dis.
20	Darlington Iron Co. [L.]	12 10 0	¾	¼
50	Davy Brothers [L.]	22 10 0	2	3 pm.
5	Diamond Fuel Co. [L.]	5 0 0		—
32	Ebbw Vale Co. [L.]	29 0 0	21	19 dis.
100	Fox, Samuel, and Co. [L.]	80 0 0	30	31
10	General Mining Ass. [L.] (£1 returned)	9 0 0	2	3
20	Great Western Coal Co. [L.]	17 0 0		—
2	Gwyngwillim Colliery Co. [L.]	2 0 0		—
15	Hopkins, Gilkes, and Co. [L.]	11 0 0	9	8 dis.
50	Knowles, Andrew, and Sons [L.]	17 0 0	13½	14
10	Llay Hall Coal, Iron, & Firebrick [L.]	10 0 0	3	1 dis.
5	Littledean Woodside Coll. Co. [L.]	5 0 0		—
50	Llynvi, Ogmore, & Tondu Co. [L.]	50 0 0	5	5½
10	Lydney and Wigpool Iron Ore [L.]	8 5 0	10	9 dis.
10	Marbella Iron Ore Co. [L.]	10 0 0	7½	7 dis.
6	Mersey Steel and Iron Co. [L.]	5 0 0		—
10	Midland Iron Co. [L.]	5 0 0	1½	1 dis.
5	Mold Argoed Colliery Co. [L.]	5 0 0	3	2¼ dis.
10	Monkland Iron and Coal Co. [L.]	10 0 0	7½	7 dis.
4	Mwyndy Iron Ore [L.]	3 10 0		—
100	Nant-y-Glo and Blaina (8 p.c. pref.)	100 0 0	16	20
3	Nerbudda Coal and Iron [L. & Red.]	2 0 0	1	1¼ pm.
20	New Sharlston Collieries [L.] Pref.	20 0 0	17	16 dis.
10	Newport Abercarn Coal Co. [L.]	10 0 0	4	4½
10	Northmptn. Coal, Iron & Wagon [L.]	8 0 0		—
10	Northfield Iron Co. [L.]	8 0 0	3½	3 dis.
1	Norton Green Coal Co. [L.]	1 0 0		—
35	Palmer's Shipbuilding and Iron [L.]	25 0 0	15	14½ dis.
100	Parkgate Iron Co. [L.]	65 0 0	15	10 dis.
20	Patent Nut and Bolt Co. [L.]	14 0 0		7½ pm.
20	Patent Shaft and Axletree [L.]	10 0 0	½ dis.	par
20	Pelsall Coal and Iron [L.]	15 0 0	12	11½ dis.
50	Phœnix Bessemer Co. [L.]	40 0 0		—
50	Rhymney Iron Co. [L.]	50 0 0	18	20
10	Richards and Co. [L.]	10 0 0		—
10	Sandwell Park Colliery Co. [L.]	10 0 0	13½	13½
10	Ditto New	5 0 0	2	2½ pm.
10	Shotts Iron Co. [L.]	100 0 0	90	93
100	Sheepbridge Iron and Coal [L.]	55 0 0	20	19 dis.
50	Silkstone & Dodworth Cl. & Iron [L.]	27 0 0		—
20	Skerne Ironworks [L.]	20 0 0	15	14½ dis.
50	Somorrostro Iron Co. [L.]	50 0 0		—
25	South Wales Coal Co. [L.]	21 0 0	6½	7½
100	Staveley Iron and Coal Co. [L.]	60 0 0	18	20 pm.
100	Ditto ditto New	10 0 0	4	4½ pm.
10	Swansea Valley Steam Coll. Co. [L.]	6 0 0		
100	Thames Iron Company	100 0 0		—
50	Tredegar Iron and Coal Co. [L.]	20 0 0	11	9 dis.
25	Ditto B. shares	25 0 0	21	22
20	Ulverston Mining Co. [L.]	12 0 0	5	3 dis.
10	Vancouver Coal [L.]	6 0 0	1½	1½ dis.
100	Vickers, Sons, & Co. [L.]	100 0 0	30	35 pm.
50	Welsh Ironworks Co. [L.]	50 0 0		—
25	W. Cumberland I. and Steel [L.]	20 0 0	14	12 dis.
10	West Mostyn Coal [L.] (12 p.c. pref.)	5 0 0		—
5	West Swansea Colliery Co. [L.]	5 0 0		—
10	Whitehaven Iron Co. [L.]	10 0 0		—
100	Wigan and Whiston Coal Co. [L.]	70 0 0		—
100	Wigan Coal and Iron Co. [L.]	75 0 0		—

WAGON COMPANIES.

10	Birmingham Wagon Co. [L.]	10 0 0	17½	18
10	Ditto, 2nd issue	4 0 0	3	3½ pm.
10	Ditto, pref., 6 per cent.	10 0 0	12	13½
20	British Wagon Co. [L.]	10 0 0	par	½ pm.
10	Gloucester [L.]	10 0 0	9	9½
10	Ditto, 5th issue	5 0 0	1	½ dis.
10	Met. Rail. Car. and Wagon Co. [L.]	5 0 0	3½	3½ pm.
5	Ditto, pref., 6 per cent.	5 0 0	5½	6
10	Midland	10 0 0	7	7½ pm.
20	North Central Wagon Co.	20 0 0	27¼	27¾
5	Rail. Car. [L.] (Oldbury)	5 0 0	5½	6
5	Ditto, pref., 6 per cent.	5 0 0	5	5½
20	Sheffield Wagon Co. [L.]	15 0 0	3¼	3¾ pm.
10	Yorkshire Wagon Co. [L.]	10 0 0	4½	5 pm.

TELEGRAPH COMPANIES.

"St."	Anglo-American	100 0 0	61	61½
10	Brazilian Submarine	10 0 0	6¾	6¾
20	Direct United States Cable	20 0 0	12⅞	13⅛
10	Eastern	10 0 0	7¼	7½
10	East. Exten., Australia and China	10 0 0	7¼	7½
10	Great Northern	10 0 0	7½	7¾
25	Indo-European	25 0 0	19	20
10	Mediterranean Extension	10 0 0	2¼	2¾
8	Reuters	8 0 0	9½	10½
Stk.	Submarine	100 0 0	220	230
10	West India and Panama	10 0 0	2⅝	2⅞
20	Western and Brazilian	20 0 0	4⅜	4⅝
$1000	Western Union, 7 per cent. Mort. Bonds	$1000	113	115

MISCELLANEOUS.

Stk.	Atlantic and Great Western Leased Lines, Rental Trust	100 0 0	38	40
25	Australian Agricultural	21 10 0	83	85
25	Austral. Mort. Land and Finance [L.]	5 0 0	6½	7 pm.
10	Avonside Engine [L.]	7 0 0	5	3 dis.
Stk.	Baltimore and Ohio, 6 per cent.	100 0 0	105	107
10	Brighton Aquarium [L.]	10 0 0	9½	10½
Stk.	Cent. of New Jersey Con. Mort.	100 0 0	68	70
Stk.	Cent. Pacific of Calif., 1st Mort. 6 p.c.	100 0 0	106½	107½
25	City of London Real Property [L.]	12 0 0	1¼	1¾ pm.
5	Diamond Rock Boring	4 10 0	2¼	2¾ dis.
15	English and Foreign Credit	8 0 0		—
16	Fore Street Warehouse [L.]	14 0 0	10½	11½ pm.
15	Foster, Porter, and Co. [L.]	10 10 0	10	11 pm.
5	Gen. Phos. & Chem. Works Co. [L.]	5 0 0		—
1	Greenhill [L.]	1 0 0		—
5	Kit Hill Tunnel [L.]	1 0 0		—
17	Hudson's Bay Company	17 0 0	10	10½
10	Huntington Copper and Sul. Co.	9 0 0	8¼	7¾ dis.
Stk.	Illinois Central, $100 shares	100 0 0	75½	76½
Stk.	Illinois & St. Louis Bridge, 1st Mort.	100 0 0	91	93
Stk.	Ditto, 2nd Mort., 7 per cent.	100 0 0	40	50
Stk.	Illinois Cent. Sinking Fund, 5 p. cent.	100 0 0	96	98
Stk.	Ditto, 6 per cent.	100 0 0	107	109
7½	Imperial Credit [L.]	7 10 0	7⅜	7⅝
—	Ditto, Surplus Certificate	—	6½	6¾
Stk.	Lehigh Val. Con. Mort., A, 6 p. cent.	100 0 0	100	102
10	Milner's Safe [L.]	10 0 0	7¾	8¼
25	National Discount [L.]	5 0 0	9	9½
Stk.	N. Cent. Rail. Con. Mort., 6 per cent.	10 0 0	80	82
10	Pawson and Co. [L.]	8 0 0	¼ dis.	¼ pm.
50	Peninsular and Oriental Steam	50 0 0	38	40
Stk.	Pennsyl. Gen. Mort. 6 p. cent., 1910	100 0 0	106	107
Stk.	Ditto, Con. Sink. Fund, 6 p. ct., 1905	100 0 0	91½	92½
Stk.	Scottish Aust. Investment Company	100 0 0	191	196
Stk.	Ditto, 6 per cent. Preference	100 0 0	125	130
10	Silber Light (ord. sh.)	10 0 0		—
20	Suez Canal shares	20 0 0		—
12	Telegraph Construc. & Mainte. [L.]	12 0 0	27½	28
5	Ditto, Second Bonus Three per Cents	5 0 0	2½	2¾
10	Tharsis Sulphur and Copper Co.	10 0 0	22½	23½
Stk.	Union Pacific Land Grant, 1st Mort.	100 0 0	103	105
Stk.	Union Pacific Railway, 1st Mort.	100 0 0	106	108

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